



Ffestiniog & Welsh Highland Railways

Interpretation and Boston Lodge Project

**RIBA Stage 2
Design Report**

November 2020

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1. Introduction



View of Boston Lodge from the end of the Cob



A working site: A shelf of temperature gauges and other components used by the Railway

Madock's embankment, known as the Cob, less than a mile from the Porthmadog terminus of the Ffestiniog Railway in North Wales. Boston Lodge Works developed on the quarry site which supplied the stone for the construction of the Cob, later evolving as the Ffestiniog Railway manufactured and repaired its earlier slate wagons and subsequently steam locomotives.

The Ffestiniog Railway is of international significance as it pioneered the use of steam power on a narrow gauge railway and clearly demonstrated the practicability of building narrow gauge railways in terrain where the building of a standard gauge railway would be impracticable or uneconomic. This led to the building of numerous narrow gauge railways throughout the world. It also enabled the transport of local Welsh slate to the rest of the world and as such forms an integral part of the story of the development of the Welsh slate industry.

Thread (AABC Accredited Conservation Architects and Lead Consultant) has been appointed by the Ffestiniog and Welsh Highland Railways (FfWHR) to develop, alongside the FfWHR, a philosophical and practical approach to the conservation of the structures at Boston Lodge Works, both in terms of the fabric repairs required but also structural and service interventions to support the continued sustainable use of the site.

It is a rare opportunity to enhance, complement and enrich the fragile nature of this richly layered site so that the heritage significance of the current buildings, in support of the Railway's Heritage, can be better understood by visitors.

We recognise that these buildings are in the service of the railway, so conservation work will seek to enable the site to be secured and understood as a living, breathing and atmospheric working space. In addition, new sensitive, pragmatic and sustainable interventions are required to facilitate the continued unbroken use of this site, as originally intended.

This project has at its core the following main objectives:

- To ensure the importance of the railways' heritage, and that of the slate industry that it served, is communicated to the 250,000 plus visitors a year, who are increasingly unaware of this heritage;
- To conserve, restore and rebuild a number of buildings of historic significance at Boston Lodge Works, some of which are derelict;
- To make these buildings more efficient as a working site and to improve the existing conditions for the staff, apprentices, trainees and volunteers who practise heritage skills there in order to service the heritage railway;
- To open up supervised public access to Boston Lodge Works and its heritage for the first time via an activity programme which will bring significant numbers of non- traditional railway visitors for managed tours, talks and skills training and via which they can also learn about the significant heritage and series of important world firsts which have taken place at BLW. Additionally, the project will provide Interpretation at key points across the railway network (including at BLW to support guided tours) and on the FfWHR heritage trains;
- To address a skills shortage in the industrial heritage sector by offering traineeships, work placements, practical workshops and new volunteering opportunities.

Thread is working closely with the following consultants which form part of the design team: **Integral Engineering Design** (accredited conservation structural and civil engineers); **E3 Consulting Engineers** (mechanical and electrical consultants) and **C2 Safety** (Principal Designer). Thread is also working alongside the Activity Planning and Interpretation Design team to develop the proposals (refer to Creative Core's Stage 2 report).

Please refer to the Stage 2 reports compiled by Integral Engineering Design, E3 Consulting Engineers and C2 Safety respectively.

2. Site

Boston Lodge Works is situated in the Aberglaslyn Landscape of Outstanding Historical Significance. The Works are built on the site of the floor of a quarry situated at grid reference SH 584378, about a quarter of a mile west north east of Penrhyn Point. Penrhyn Point is the headland between the Glaslyn and Dwyrdd estuaries.

Historically, the main site is divided into three areas known as:

- The top yard
- The bottom yard
- Glan y Mor

The top yard is the oldest part of Boston Lodge. It is surrounded by the residences at No's 1 and 2 Boston Lodge (the oldest existing building on site), the signals and telegraph stores and telephone exchange, the brass store, the R H R Garraway amenity block, the foundry, the blacksmiths' shop, Plas Smart and the main line of the Railway. Road access to the Works is through the top yard. A wagon shed, a carpenters' / joiners' shop, and an extension to the blacksmiths' shop and a sawmill once also existed around the yard.

The bottom yard is dominated by the erecting shop and the connecting machine shop with offices above it. An office / stores building and an oil store are on the east side of the yard. The main line of the railway and Glan y Mor form the other two sides of the yard. A boiler house and engine house once separated the machine shop from the foundry and sawmill to the east and a two-road shed and boundary wall separated the yard from Glan y Mor.

Glan y Mor lies to the west of the bottom yard and is dominated by the modern carriage works and carriage shed with a private modern shed between them. The original carriage shed in the south-east corner of Glan y Mor has been extended at its front and the combined shed is now a locomotive shed. Three gunpowder sheds were located at the south-west end of Glan y Mor.

To the east of the main site area, is the original locomotive shed with a weigh house at its far end. Beyond this is a turntable, which now carries a garage, and a further two residences, No's 3 and 4 Boston Lodge.

Please refer Thread's Existing Site Plan (drawing 81_GA_00) for ease of reference.

Key to Building References: (alternative names in brackets)

H0	Old Engine Shed & Weigh House
H1	Plas Smart (Superintendent's Office)
H2	Smithy (Blacksmiths)
H3	Old Oil Store
H4	Iron Foundry
H5	Machine Shop (<i>not part of scope</i>)
H6	Brass Foundry
H9	Wagon Shed (Wagon Repair Shop)
H10	Boston Lodge Cottages 1 & 2 (Georgian Barracks)
H14	The Stores (The Den, Old Carpenters Shop)
H15	Blacksmiths Extension
OPS12	R H R Garraway amenity block (Mess building)
H16	Toll Gate Steps

Note on orientation:

The true orientation of the site is north east - south west. For clarity, an artificial Site North has been adopted, with Porthmadog and the Cob running North to South, and Boston Lodge Works running West to East, following the railway. References to elevations will refer to this terminology.



View over the Top Yard and out towards the Cob and Porthmadog in the distance

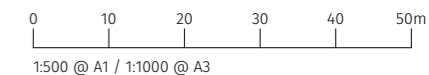
3 & 4 Boston Lodge Cottages

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Weigh House & Old Engine Shed

H0

Plas Smart

H1

Old Oil Store

Boston Lodge Cottages 1 & 2

Top Yard

H16

Smithy & Iron Foundry

Stores Building

H3

H6

H2

Old Brass Foundry

H10

OPS12

H4

H14

H5

Bottom Yard

Machine Shop

Erecting Shop

Glan y Mor

Old Carriage Shed

Thread

Client: FWHR
Project Architect: Claire Fear

BOSTON LODGE WORKS

EXISTING SITE PLAN

Scale:
1:500 @ A1 / 1:1000 @ A3

Date:
NOVEMBER 2020

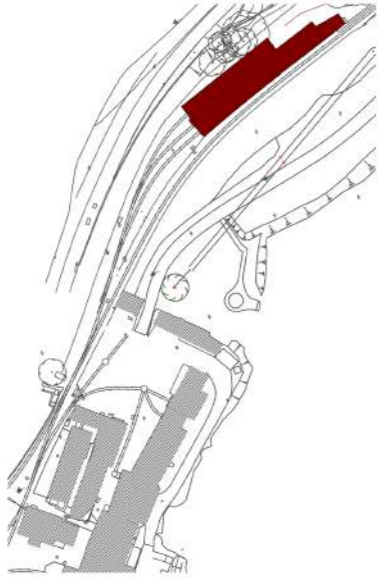
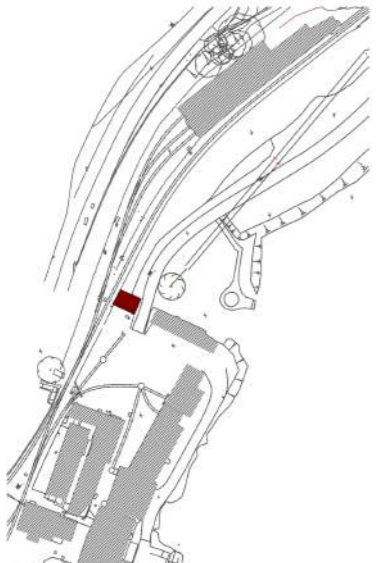
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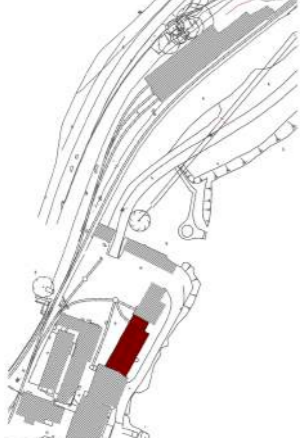
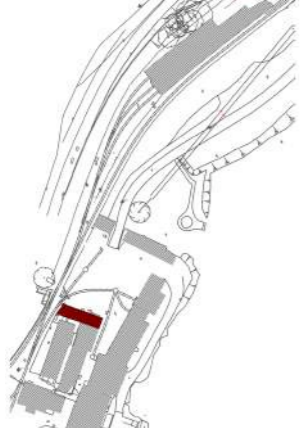
3. Summary of Changes since Round 1

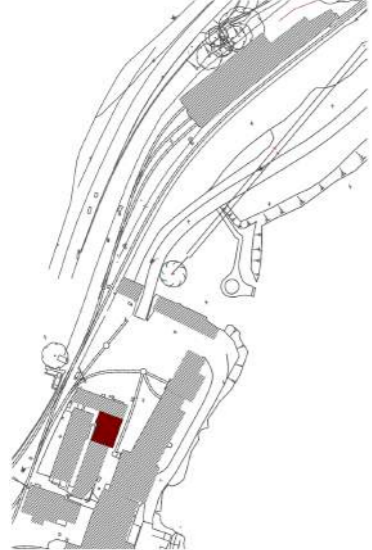
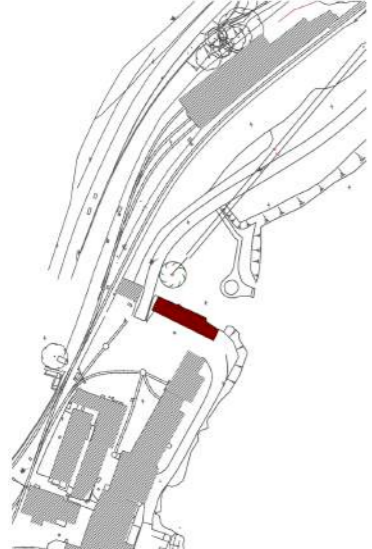
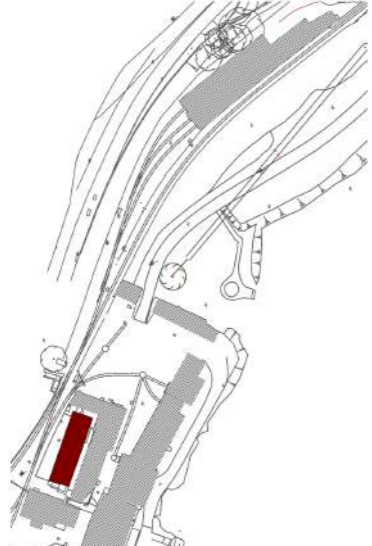
Thread has worked carefully to review the Round 1 proposals and to refine the FfWHR's brief, with the objective of **conserving and making the best use of the historic buildings at Boston Lodge.**

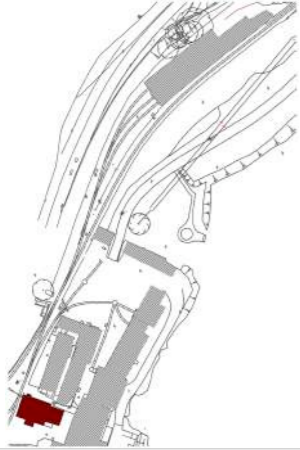
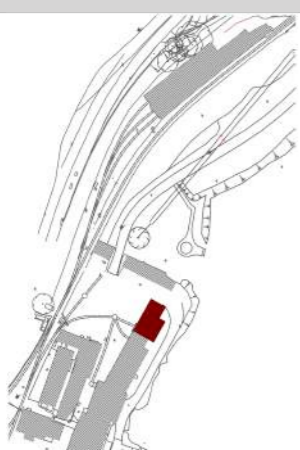
This has been rooted in an understanding of the historical development of the site, its historic fabric and processes and the day-to-day operations of the present-day Railway.

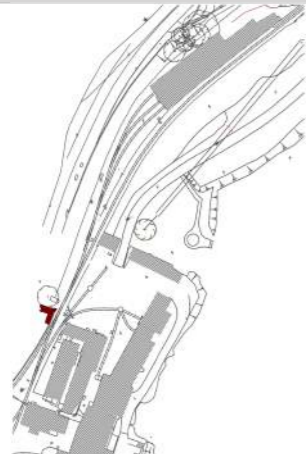
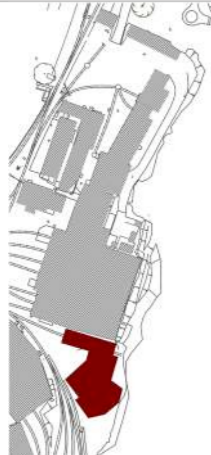
The table below summarises the difference between the Round 1 proposals and the proposed concept for RIBA Stage 2:

ACCOMMODATION AND PROPOSALS			
BUILDING/STRUCTURE	ROUND 1 PROPOSAL	RIBA STAGE 2 PROPOSAL	MOTIVATION
H0 - Old Engine Shed, Weigh House			
	<ul style="list-style-type: none"> • Locomotive Shed; • Covered Welcome Area for visitors for tour arriving at the Halt (to the east end - but not including the weigh house); • Start of the visitor tour in the north door of the east end of the space, then walking down through the building to exit at the west end. 	<ul style="list-style-type: none"> • Main visitor undercover area for the welcome to be in H9 (see further on); • Arrival at Boston Lodge Halt but tour to begin in the Top Yard; • The Old Engine Shed can then be accessed from the main west entrance - with the full impact of the experience of opening the doors; • No new structures - Minimal need for architectural intervention to this building - repairs to the floor to assist accessibility, and light touch conservation only; • M&E to better illuminate the engines. • The majority of the work here will fall under interpretation; • No changes to the Weigh House proposed 	<p>Reduced architectural intervention</p> <p>Further consideration for the use of the Weigh House is required</p>
H1 - Plas Smart			
	<ul style="list-style-type: none"> • Completion of Conservation / Repair works • Office 	<ul style="list-style-type: none"> • Completion of Conservation / Repair works • Potential PPE for visitors or heated office space 	<p>Similar approach - conservation only</p> <p>Further consideration for the best use of Plas Smart</p>

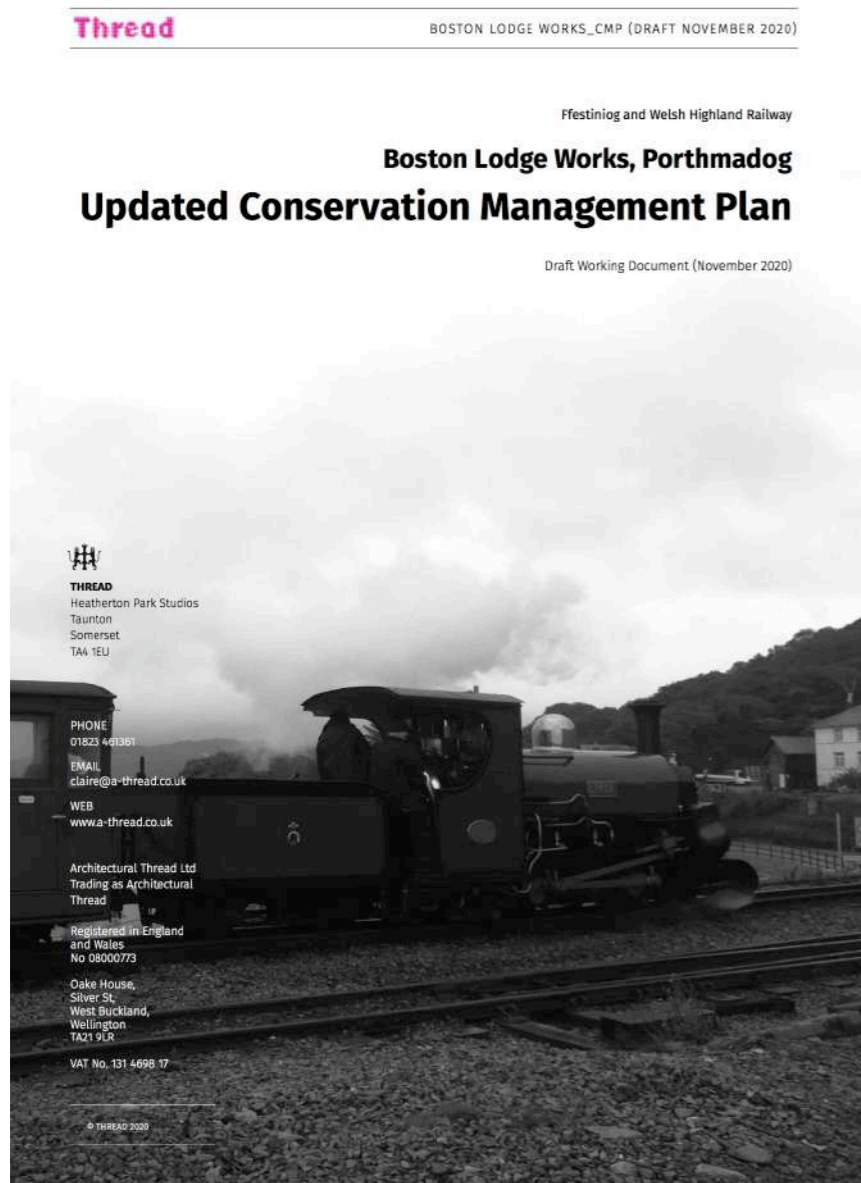
BUILDING/STRUCTURE	ROUND 1 PROPOSAL	RIBA STAGE 2 PROPOSAL	MOTIVATION
H2 - Smithy			
	<ul style="list-style-type: none"> • Interpretation and demonstrations for visitors; • Practical use for tasks in support of the railway that echo historic use in the building. 	<ul style="list-style-type: none"> • Interpretation and demonstrations for visitors; • Practical use for tasks, undertaken by volunteers, in support of the railway that echo historic use in the building. • Includes 2no. Storage Areas - both independently accessible from the Service route to the south of the building; • Note this would replace the lost storage capacity in the Old Oil store or the Blacksmith shop extension; • Small inaccessible area to the south of the building will be dedicated to bats as part of the ecological mitigation strategy to support wildlife on the site. 	<p>Similar approach, with additional storage</p>
H3 - Old Oil Store (and telephone exchange)			
<p>Telephone Exchange</p>	<ul style="list-style-type: none"> • Proposed for demolition; • Relocation of the internal equipment to H3 - Old Oil Store. 	<ul style="list-style-type: none"> • To be demolished as the modern 1970 construction detracts from the historic views of the Top Yard; • Demolition would have a positive effect on the built environment and would be helpful to site operations; • Demolition also exposes a window to H6 and door to H3. 	<p>Similar approach -Reinstates historic views of top yard</p>
<p>Old Oil Store</p> 	<ul style="list-style-type: none"> • IT Hub Building; • Requires the relocation of approx. 25m2 of storage (allowing for the locker area, steps and store sorting). 	<ul style="list-style-type: none"> • 1no. Visitor WC; • 1no. Accessible WC (Part M compliant); • Both WCs connect easily to existing foul drainage • Storage; • IT/ Data Room; • Internal walls lined with new insulated partitioning for ease of installation of services and minimal intervention to historic fabric. 	<p>Provision of visitor WCS and additional storage</p>
H4 - Iron Foundry			
	<ul style="list-style-type: none"> • Interpretation and demonstrations for visitors 	<ul style="list-style-type: none"> • Interpretation and demonstrations for visitors; • Workshop space; • Removal of ceiling; • Allowance for storage racks on the south wall to enable flexibility of use for the remainder of the space. 	<p>Practical approach for flexibility of use</p>
H5 - Machine Shop			
	<ul style="list-style-type: none"> • Minor Conservation Works 	<p>Omitted from scope of current project</p>	

BUILDING/STRUCTURE	ROUND 1 PROPOSAL	RIBA STAGE 2 PROPOSAL	MOTIVATION
H6 - Brass Foundry			
	<ul style="list-style-type: none"> • “found in place” store - to retain the charm and feel that it does currently; • Forms part of visitor access route; • Accessed as Works storage infrequently. 	<ul style="list-style-type: none"> • Staircase and shelving to be retained in place to retain the unique internal structure (comprising rails as beams and posts integral to the shelves); • An alternative experience for visitors is proposed - views through a periscope rather than access via the staircase, which is very steep; • Periscope to be formed in-house to echo the reuse of rails etc in this building, and will enable people to ‘spot’ specific items upstairs; • Some form of visual access but not physical enables the floor structure and boarding to remain as existing (with minor repairs). 	<p>Reduced intervention to maintain authenticity of current space</p>
H9 - Wagon Shed/Repair Shop			
	<p>Rebuild:</p> <ul style="list-style-type: none"> • New build small item storage; • Proposal drawings illustrate an enclosed building with windows and doors - similar to the historic photos prior to the building when it fell into disrepair. It is thought that this was the latest phase of the buildings adaption - when the open fronted shed was infilled to form enclosed space. 	<p>Rebuild:</p> <ul style="list-style-type: none"> • New build to provide weather-tight storage, area for day-to-day deliveries and a flexible open space suitable for slate wagons as part of the visitor experience; • Design echoes the earlier form of the building with a series of open bays and slate rubble piers; • Corrugated iron to be used for external doors and visible external cladding in keeping with the historic use of the material on site; • Pallet storage behind H15 	<p>Design guided by earlier form of building and practical, flexible use</p>
H10 - Boston Lodge 1 & 2/Georgian Barracks			
	<ul style="list-style-type: none"> • Ground Floor - 2no. Units of one-bedroom accommodation; • First Floor - Office space - open plan to No. 2 which relies on demolition of internal partitions to the first floor of no.2. 	<ul style="list-style-type: none"> • Ground floor Cottage 1 - one-bedroom accommodation with shared entrance hall to • First Floor Cottage 1 - one-bedroom accommodation with kitchenette; • Ground floor Cottage 2 - office for up to 5 people with accessible WC and kitchenette; • First floor Cottage 2 - office for up to 8 people; • The proposed layout keeps accommodation and office use separated by masonry party wall; • The proposal however allows for the potential future expansion of the first floor office into Cottage 1 for greater flexibility over time; • Landscaping work to form ramped access to the south of H10 allows for full accessibility to the ground floor office (No lift required) 	<p>Allows for future expansion of office space and accessibility</p>

BUILDING/STRUCTURE	ROUND 1 PROPOSAL	RIBA STAGE 2 PROPOSAL	MOTIVATION
H14 - Stores Building			
	<ul style="list-style-type: none"> • Welcome and Learning, Archive and Lecture Space • Need to relocate approx 45m2 of storage; • Need to relocate 36 lockers (full height) 	<p>Refurbishment, Reinstated Gable and Extension</p> <ul style="list-style-type: none"> • Proposed new Den, Kitchen, Locker Area, Wash Off area, unisex WCs and showers, Electricians Workshop & Store; • Removal of the ceiling structure to create double volume space for Den; • Space for 56 full height lockers - integrated with flow through wash off area into Den; • Close to the foul drainage and with a good connection to the bottom yard 	<p>New location for Den improves connections to the works facilities and practical flow</p>
<p>Later Porch structure</p>	<p>Proposed for demolition</p>	<ul style="list-style-type: none"> • Proposed for demolition - following careful consideration of historic photographs and reinstatement of gable above oil store; • Proposed new lobby and wash up area will serve the role of the porch 	<p>Reinstatement of historic views</p>
<p>Oil Store</p>	<p>Gabled first floor reinstated and incorporated into the proposed new Mess room and first floor offices.</p>	<ul style="list-style-type: none"> • First floor and gable reinstated; • Ground floor to be used as Lobby and Wash-off area, WCs and Showers leading into Locker Area and Den (as noted above); • Extension to accommodate more WCs and new Electricians Workshop and Store to ground floor; • First floor to be fully insulated as possible office space and storage; • Well located for access to works facilities 	<p>Improved flexibility of use and better flow to work with operations</p>
OPS12 - Den/Mess Building			
	<p>General:</p> <ul style="list-style-type: none"> • Existing 1970s building demolished; • New two storey replacement using existing Den footprint and extending into the old store (south end of H14); • Footprint extends to touch south wall of H10 • Mess room; • Separate male and female WCs and 3 showers; • Locker stores; • Offices 	<p>General (ground floor only):</p> <ul style="list-style-type: none"> • Existing 1970s building to be demolished; • New single storey replacement with smaller footprint (shorter and not touching H10 - to open up the access route between H14 and H4/H5); • New internal storage space and plant store; • The use and flow of the den facilities was considered to be better suited to a wider building H14 (refer to above); • Allows for ramped access to H10 to the north for full accessibility of office space. 	<p>Reduced New Build Area sensitive to surrounding historic buildings</p>
H15 - Blacksmiths Extension			
	<p>New build:</p> <ul style="list-style-type: none"> • Arrivals and Handling Storage; • Storage for small items = 43m2 approx; • Palletised storage = 43m2 approx; & • Gap between H15 and H9 for vehicles to access the back of the machine shop. 	<p>New build:</p> <ul style="list-style-type: none"> • New training room and Britomart engine display (in location of previously demolished Britomart Shed) • Pallet undercover storage to south of building and full access by forklift and vehicles between H9 and H15 and quarry face (enhances visual experience of Top Yard but fully functional); • Views from the end of H15 through to the Smithy and Iron Foundry door; • Insulated timber frame construction with corrugated iron cladding to reference historic structures. 	<p>Reinstatement of historic views and connections while meeting practical requirements</p>

BUILDING/STRUCTURE	ROUND 1 PROPOSAL	RIBA STAGE 2 PROPOSAL	MOTIVATION
H16 - Toll Gate Steps			
	Rebuilding of the Tollgate steps	Conservation repairs to stonework	Sensitive conservation repairs to ensure safety only
Small Loco Shed			
	Proposals developed in-house by FFWHR with established suppliers / contractors	<ul style="list-style-type: none"> • Outside of Thread's scope of work - <i>refer to volunteer-led report on small loco shed.</i> 	
Landscaping and drainage			
	<p>Improved path between Old Engine Shed and Top Yard:</p> <ul style="list-style-type: none"> • New clay bound gravel (hoggin) surfacing from the Boston Lodge halt (station), to the entrance point to the top yard. • New timber crossing across main line; • New railings; • Timber gates to Top Yard between Plas Smart and Wagon Shed reinstated <p>Surfacing to Top Yard:</p> <ul style="list-style-type: none"> • Levels to be reduced in relation to historic buildings to reduce water ingress and associated damp issues; • Renewal of surfacing; • Land Drainage 	<p>Improved path between Old Engine Shed and Top Yard:</p> <ul style="list-style-type: none"> • New self-binding slate waste gravel surfacing from the Boston Lodge halt (station), to the entrance point to the top yard. • New timber crossing across main line; • Timber gates to Top Yard omitted as they would hamper the day-to-day running of the site; <p>Surfacing to Top Yard:</p> <ul style="list-style-type: none"> • Levels to be reduced minimally in relation to historic buildings to reduce water ingress and associated damp issues (refer to Landscaping Strategy); • New free-draining sub-base topped with Type 1 slate waste gravel; • Land Drainage (<i>refer to Integral's Stage 2 report</i>) 	Practical proposal rooted in understanding of the archaeological build-up and locally available materials
Total Storage			
	H6, H9, H15 (excluding external pallet storage)	H2, H3, H6, H9 (excluding pallet storage in H15)	The use of existing buildings is maximised without harm to their significance while operational activities are all maintained

4. Historical Analysis



The Conservation Management Plan provides detailed information of the site's significance and individual building descriptions

The design proposals are based on a thorough understanding of the site's historical development and significance.

Thread initially reviewed all available information from the Round 1 submission as well as the information supplied by the FfWHR, including the current Conservation Management Plan.

Historical Development Drawings

Careful analysis of this existing information showed that there was a need to collate the site's listed buildings; historical development; and historical uses and processes, as much of this information was only available in a series of separate written reports for individual buildings. This research has been compiled by Thread in a visual format that presents the site's significance as a whole, so that it can be better understood in the design process, by the client and by other stakeholders.

Thread's historical analysis drawings highlight the following:

- Historical Listings by Cadw across the entire site, as well as local designations (the first available drawing to bring all of the relevant listings together on one sheet) - refer to drawing 81_1_001;
- Historical Development of the whole site, summarising the changes to the site's buildings - refer to drawing 81_1_002;
- Historical Uses and Processes across the site, highlighting those buildings which have not had significant changes to their function - refer to drawing 81_1_003;
- Historical Rail Road Layouts, showing the general development of the site from the Top Yard, to the Bottom Yard and later expansion to Glan y Mor - refer to drawing 81_1_004.

From the above drawings it becomes clear that H10 (Boston Lodge 1 & 2) and the Top Yard are the points from which the site developed - from its early slate quarry days, to the repair of the Railway's slate wagons, the arrival of steam locomotives and passengers. The Top Yard thus marks the start of Boston Lodge's story.

Wider Heritage Context

Built as a gravity and horse-drawn line, to transport slate from the quarries in the mountains around Blaenau Ffestiniog to the harbour at Porthmadog, the Ffestiniog Railway forms part of a wider area which is acknowledged as being integral to the internationally significant Slate Landscape of Northwest Wales.

The UNESCO World Heritage Site nomination of the Slate Landscape of Northwest Wales attests to the significance of this landscape. The outcome of the nomination will be decided by UNESCO in 2021. A successful inscription of the Slate Landscape as a World Heritage Site would mean that this landscape is acknowledged as being one of the world's

"places of Outstanding Universal Value to the whole of humanity. This means that their cultural and/or natural significance is so exceptional as to transcend national boundaries and to be of common importance for present and future generations of all humanity." (UNESCO)

This section is to be read in conjunction with the Updated Conservation Management Plan document for further information on the site's significance and individual building descriptions.

Updated Conservation Management Plan

The study of the site's historical development and significance has enabled Thread to update the FfWHR's Conservation Management Plan (*draft version in progress*). This document has been compiled by Thread, and comprises their work, and an assimilation of the work and research of Dr Dafydd Gwyn and later work by John Alexander, which form the basis of the earlier versions of the conservation management plan. The valued input of the FfWHR Client Team; and that of the FfWHR Project Steering Group has also informed this document.

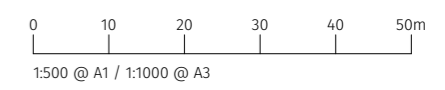
The Conservation Management Plan is intended to ensure that the FfWHR and all relevant parties follow best practice in conservation legislation, and integrate the best interests of the historic fabric of the buildings with an operational works suitable for the 21st century.

The historical analysis and associated conservation management work has informed an understanding of the relationship between the existing buildings, those which have been lost, and the potential for new structures to preserve and enhance the spaces between.

With the collective aim of reducing the development's impact on the site's historical significance, and meeting the FfWHR's brief to sustain a working, living site whilst enhancing its understanding for visitors, Thread's design proposals are set out in the following pages.

3 & 4 Boston Lodge Cottages (c. 1851 & 1856/7)
Not listed

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Weigh House & Old Engine Shed (c. 1856/7 & 1863)
Weigh House Grade II listed (no. 14423)
Engine Shed Grade II listed (no. 14424)

Plas Smart (c.1843)
Grade II listed (no. 14419)

Former Oil Store (c. 1840s)
Grade II listed (no. 14418)
Includes the new telephone exchange extension

Boston Lodge Cottages 1 & 2 (c. 1808)
Grade II listed (no. 14416)
Listed for its importance as a former workmens' barracks and offices, the oldest of the Boston Lodge buildings

Stores Building (c. 1850s)
Grade II listed (no. 14415)
Includes new oil store which was part of old sawmill

Top Yard c. 1836

Smithy & Iron Foundry (c. 1847-9)
Grade II listed (no. 14413)
Listed as a single building

Old Brass Foundry (c. 1837/38)
Grade II listed (no. 14417)

Bottom Yard c. 1850-60s

Machine Shop (c. 1848, 1850s, 1868)
Grade II listed (no. 14412)
Includes pattern loft

Erecting Shop (c. 1877 & 1900)
Grade II listed (no. 14411)

Crane at south end of Boston Lodge Works (late 19thC)
Grade II listed (no. 14414)

Old Carriage Shed (c. 1865)
Not listed
Also known as Glan y Mor Shed

Glan y Mor mid 20thC

Cadw: Listings form part of this especially complete example of a C19 railway engineering works which has important historical associations with the Ffestiniog Railway. Group value.

Other local listings and designations of relevance:

The Cob (partly in Penrhyndeudraeth) c. 1808-11
Grade II* listed (no. 85406) - includes Boston Lodge Curve (c. 1834)
At the Boston Lodge end the Cob terminates at the gated steps between the railway line and the road.

Toll House at the E End of The Cob (Also Known as The Rebecca Tollgate) c.1836/1857
Grade II listed (no. 5235)

Pen Llyn a'r Samau / Llyn Peninsula and the Sarnau
Designated Special Area of Conservation
- only example of a percolation lagoon in Wales
- fully marine salinity, tide-swept sandbanks and relatively sheltered sandbanks
- representative examples of bar-built estuaries in north-west Wales
(<https://sac.jncc.gov.uk/site/UK0013117>)

Morfa Harlech
National Nature Reserve

Morfa Harlech a Morfa Dyffryn
Designated Special Area of Conservation
- embryonic shifting dunes
- at the junction of two major marine sediment transport systems
(<https://sac.jncc.gov.uk/site/UK0030049>)

Tyroedd a Glannau Rhwng Cricieth ac afon Glaslyn
Site of Special Scientific Interest

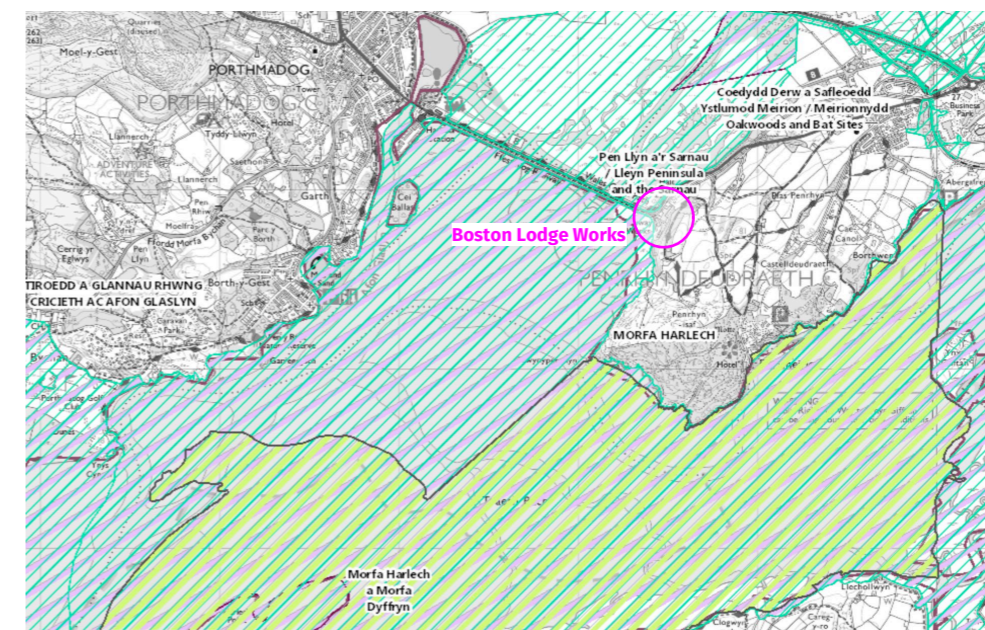
Coedydd Derw a Safleoedd Ystumod Meirion / Meirionnydd Oakwoods and Bat Sites
Designated Special Area of Conservation
- a very large example of old sessile oak woods in north Wales, with an outstanding Atlantic flora of bryophytes and lichens
- possibly the most extensive area of alder *Alnus glutinosa* alluvial forest in north Wales
(<https://sac.jncc.gov.uk/site/UK0014789>)

Key to historical listing status:

- Grade II listed
- Not listed

REVISIONS

Rev A (2 Nov 2020): Site north included, revisions to notes



Extract from Defra Magic Map (<https://magic.defra.gov.uk/MagicMap.aspx>)

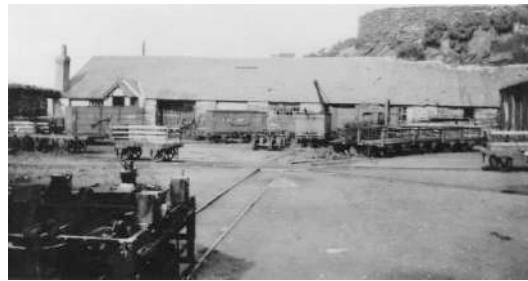


Client: FWHR
Project Architect: Claire Fear
BOSTON LODGE WORKS

HISTORICAL LISTING WHOLE SITE

Scale:
1:500 @ A1 / 1:1000 @ A3
Date:
SEPTEMBER 2020

81_1_001 A



Plas Smart (left) as part of longer range, post 1881 (FR Archives)



Top Yard from the west, July 1959 (Dennis Corley)

Plas Smart (c.1843)

Fish-belly rail track in former Wagon Store indicates possible use 1832-42
Described as a store in 1856
Converted into office for Locomotive Superintendent c. 1881
-porch, internal floor, fireplace and screen installed
Wagon Store likely to have become timber store by 1915
Timber Store roof demolished early 1960s
Chimney demolished after 1984

Boston Lodge Cottages 1 & 2 (c. 1808)

Barracks constructed to house men working on the cob c. 1808/09 - stables likely by FR c. 1837
The quarry on site was opened at the same time
Originally called Penrhyn Cottage, later named Boston Lodge in 1811
Accommodation for weighmaster and constable of the railway, stables retained in 1836
Four stables combined to form store in 1856
No.1 was converted into separate flats - 19th C partitions remain
No.2 was gutted and converted into single dwelling in 1960s

Stores Building (c. 1850s)

Constructed as the carpenter's shop and linked to old sawmill, with no rail access
New carpenter's shop built in 1877, old one became the new Stores and Works office
The Sawmill was gutted by fire in 1939
Most of the sawmill was demolished in 1956/7
Remainder of sawmill converted to oil store in 1960s

Bottom Yard c. 1850-60s

Glan y Mor mid 20thC
(part-rented 1877, purchased 1972)

Weigh House & Old Engine Shed (c. 1856/7 & 1863)

Weigh House constructed to east of toll gates c. 1856-1857
First phase Engine Shed c. 1863 (likely single road)
Engine Shed extended to join Weigh House c. 1867-1870
First timber-framed extension to north in 1878
Extension extended to north east in 1891
Slate roof of shed damaged by fire c. 1930
New corrugated iron roof by 1946 - loss of distinctive ventilators
Replaced extension with concrete block construction 1972
Concrete extension replaced with new timber frame construction in 2008
Shed and Weigh House reroofed in slate in 2008
Angled north-west side of the 1863 shed reconstructed in blockwork on a new alignment in 1970s, reconstructed in stone in 2008

Former Oil Store (c. 1840s)

Walled coal storage yard constructed in the 1840s
linked to rail system in Top Yard
Present building constructed in 1855/6 (roofed)
Strowger Telephone exchange housed in new extension in 1970

Smithy & Iron Foundry (c. 1847-9)

Constructed with three hearths c. 1847/8
Extended to the east c. 1868 and 1877/78
At least one hearth in the smithy remained in use in the late 1950s
Internal fixtures, hearths and chimneys removed in the 1960s
Substation constructed on south side in 1974

Old Brass Foundry (c. 1837/38)

Constructed as a smithy
Became brass foundry in 1870s
Major repairs in 1962 (following collapse of rear wall)
- 2no. original chimneys and pigeon-box ventilator removed
- Mezzanine floor constructed on rail structure
East-facing window was blocked when Telephone Exchange was constructed in 1970
West window blocked by amenity block 1977

Machine Shop (c. 1848, 1850s, 1868)

Early Machine shop (Engine House No.1) constructed c. 1848
Machine shop extension (Engine House No.2) constructed c. 1856
Single-storey extension with corrugated roof in 1877
Electricity substation constructed 1974
First floor extension constructed in 1979

Erecting Shop (c. 1877, 1900, 1972, 2004)

Corrugated iron clad structure first erected c. 1877
Blew down in 1899
New slate structure erected in 1900 to replace the old structure - wider than 1877 structure
Road 4 installed and floors concreted in the 1960s
New Erecting Shop extension erected in 1973
Gap between extension roofed over in 2004

Old Carriage Shed (c. 1865 & 1880s)

North-east extension built c. 1875
Two road west extension c. 1886/1889
North-east extension demolished c. 1900-1914
1886 extension hit by falling rock c. 1954
Roof of 1886 shed dismantled in 1956
Walls of extension demolished in 1958
Three road steel frame extension in 1964-68
Little change to old carriage shed since 1875

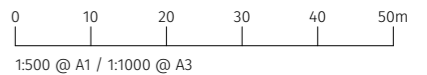
3 & 4 Boston Lodge Cottages (c. 1851 & 1856/7)

A loop line ran to the north west of the cottages in 1854
Rear Extension to No.3 in 1868/9 and 1889 (possibly 1881)
Turntable installed in 1869
No.3 retains many original internal features
No.4 has been altered significantly within
Garage built on top of turntable between 1936-1961



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Key to historical development:

- c. 1808 - 1814
- c. 1836 - 1848
- c. 1851 - 1857
- c. 1863 - 1867
- c. 1867 - 1877
- c. 1886 - 1900
- c. 1936 - 1964
- c. 1972 - 1979
- c. 1993 - 2008

Images on this sheet: extracts from Historic Building Assessments (Bob Zeepvat, Bancroft Heritage Services)

REVISIONS

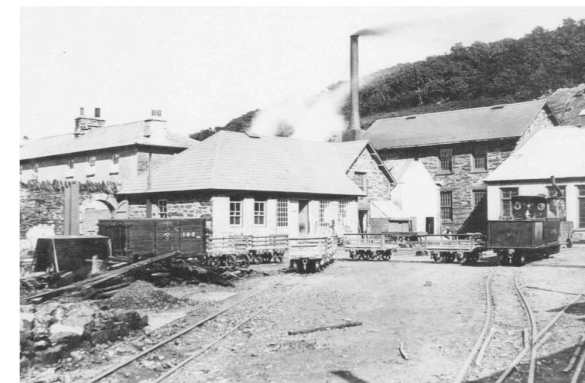
- Rev A (24 Sept 2020) - Woodworking Shop added to Top Yard, coal stores and yard enclosures indicated.
- Rev B (2 Nov 2020) - Site north included, revisions to notes



Old Engine Shed, 1887 (FRHG 2004, plate 20)



Smithy and foundry in foreground - note the chimneys for each of the hearths, 1956 (John Halsall)



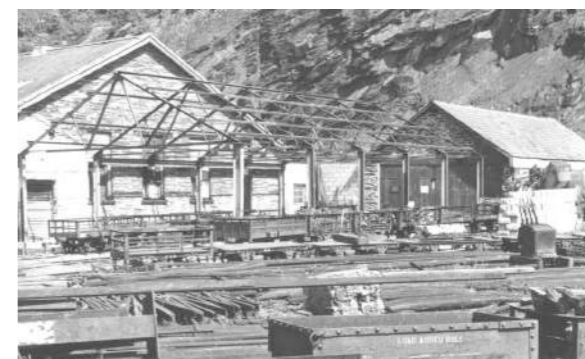
Old Carpenter's Shop, end of Sawmill, Machine Shop and portion of Erecting Shop as viewed from Bottom Yard, 1887 (after R.H. Bleasdale: FRHG 2003, plate 18)



Brass Foundry as viewed from Top Yard, 1952 (J.B. Snell)



Old Carriage Shed - extension on the right before demolition, 1958 (David Ronald)



Old Carriage Shed - steel frame extension, 1964 (JLA)

Thread

Client: FWHR
Project Architect: Claire Fear

BOSTON LODGE WORKS

HISTORICAL DEVELOPMENT WHOLE SITE

Scale:
1:500 @ A1 / 1:1000 @ A3
Date:
SEPTEMBER 2020

81_1_002 B

Weigh House & Old Engine Shed (c. 1856/7 & 1863)

Weigh House in use c. 1856-1872
Weigh house used as informal volunteer accommodation from 1954
Currently used for storage - unchanged, but weighing mechanism removed

Initial Engine shed possibly used to house two engines and tender
First phase of Engine Shed as fitting shop for running repairs c. 1863
Raised track and inspection pits provide evidence of its use since at least 1867
Boiler house and steam engine to supply steam power for lighting when engine shed joined to weigh house c. 1870 - line shafting
Smoke extractors since lost with reroofing
Currently used as storage of historic rolling stock

3 & 4 Boston Lodge Cottages (c. 1851 & 1856/7)

No.3
Housing for a company official/locomotive superintendent c. 1851-1928
Converted to ramblers' hostel c.1933-36
Let to Major I de Thierry c. 1936 - 1970s
Currently housing for FR staff

No.4
Cottage for the weighing clerk c. 1856
Let to warden of hostel c.1930s
Let to Rev. Timmy Phillips c.1936-1960
Currently let.

Thread trading as Architectural Thread.
Registered in England and Wales, Number 06000773
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0 10 20 30 40 50m

1:500 @ A1 / 1:1000 @ A3

Key to changes of use:

- No change in use since initial construction
- Minimal changes in use, or reverted back to original use
- Significant changes in use, but sympathetic to fabric
- Destructive changes in use

Plas Smart (c.1843)

Store c.1856 as part of former wagon shed
Superintendent's Office from 1881
Timber store derelict from 1954
Currently a shell (interior stripped)

Boston Lodge Cottages 1 & 2 (c. 1808)

Barracks, offices and stables constructed to house men working on the cob c. 1808/09
Part of wagon depot for Ffestiniog Railway following passing of Ffestiniog Railway Act of 1832
Accommodation for weighmaster and constable of the railway c. 1836
Staff accommodation from 1841 - likely since 1836
Stables converted to stores after introduction of steam locomotives

Stores Building (c. 1850s)

Constructed as the carpenter's shop and linked to old sawmill, with no rail access
New carpenter's shop built in 1877, old one became the new Stores and Works office - used for storage of tool supplies, spare parts and fittings
Partly used as "The Den" or mess room in the early restoration era
Remainder of sawmill converted to oil store in 1960s
Den used as an office once the new mess building was constructed in 1977
Porch added later

Former Oil Store (c. 1840s)

Initially used as an open coal store in the 1840s linked to rail system in Top Yard
The track that led into the building was removed in 1970
Strowger Telephone exchange housed in new extension in 1970 - This exchange was believed to be the largest Strowger exchange in use in the UK (now at Beamish Museum)
Currently used as storage for S&T department

Smithy & Iron Foundry (c. 1847/8)

Constructed as part of original wagon works for the Ffestiniog Railway, prior to the arrival of steam locomotives
Three hearths, tyre stove and core oven
Cupola in foundry
National Shell Factory during WWI
Continuous use until 1939 fire
At least one hearth remained in use during the preservation era into the late 1950s
Foundry currently used as storage of parts

Old Brass Foundry (c. 1837/38)

Constructed as a smithy
Became brass foundry in 1870s
Presence of chimneys until early 1960s
Used for storage of locomotive parts since insertion of mezzanine in 1962

Machine Shop (c. 1848 & 1856)

Early Machine shop as part of manufacture & repair of wagons for the horse and gravity-worked tramway
Pattern loft
Used for munitions work in WWI
Manufacture of tank parts for Glaslyn Foundry in WWII
Pattern loft used as Works offices from 1971
Ground floor of the 1856 building and 1877 extension still used as machine shop
Line shafting as evidence of earlier steam powered machinery, later powered by oil boiler then electric motors

Erecting Shop (c. 1877 & 1900)

Part of the expansion of the railway for locomotive construction in 1870s after arrival of passenger locomotives
Munition work in WWI
Maintenance and rebuilding of engines and carriages since reopening of the railway in 1954

Old Carriage Shed (c. 1865)

Housing of carriages with arrival of passenger services c. 1865
Currently a running shed for locomotives - less used engines

Bottom Yard c. 1860s

Top Yard c. 1836

Glan y Mor mid 20thC

Key historic eras:

- Construction and repairs of the Cob c. 1808-14
Top Yard opened as Quarry to supply the Cob
- Early Horse-drawn Railway and Top Yard works c. 1836 - 1863
- Arrival of Passengers & Steam Locomotives c. 1863-65
- Building of own locomotives c. 1877 - 1885 and 1971 onward
- WWI Munitions Works/National Shell Factory c. 1915-1919
- Closure of the Railway c. 1946 - 1954
- Revival c. 1954

REVISIONS

Rev A (2 Nov 2020) - Site north included, revisions to notes



Client: FWHR
Project Architect: Claire Fear

BOSTON LODGE WORKS

HISTORICAL USE AND PROCESSES WHOLE SITE

Scale:
1:500 @ A1 / 1:1000 @ A3

Date:
SEPTEMBER 2020

81_1_003 A

3 & 4 Boston Lodge Cottages (c. 1851 & 1856/7)

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1:500 @ A1 / 1:1000 @ A3

Weigh House & Old Engine Shed (c. 1856/7 & 1863)

Plas Smart (c.1843)

Boston Lodge Cottages 1 & 2 (c. 1808)

Stores Building (c. 1850s)

**Bottom Yard
c. 1850-60s**

**Glan y Mor
mid 20thC**

**Top Yard
c. 1836**

Old Brass Foundry (c. 1837/38)

Erecting Shop (c. 1877 & 1900)

Old Carriage Shed (c. 1865)

Former Oil Store (c. 1840s)

Smithy & Iron Foundry (c. 1847-9)

Machine Shop (c. 1848 & 1856)

Key to historical development:

- c. 1808 - 1814
- c. 1836 - 1848
- c. 1851 - 1857
- c. 1863 - 1867
- c. 1867 - 1877
- c. 1886 - 1900
- c. 1936 - 1964
- c. 1972 - 1979
- c. 1993 - 2008

REVISIONS



Client: FWHR
 Project Architect: Claire Fear

BOSTON LODGE WORKS

HISTORICAL RAIL ROAD LAYOUTS

Scale:
1:500 @ A1 / 1:1000 @ A3
 Date:
SEPTEMBER 2020

81_1_004

5. Design Proposals

This section summarises the the design decisions which have formed the proposed concept design for the site as a whole, and the individual buildings which form part of Thread's scope of work. All decisions up to this point have been based on the initial heritage analysis, the guiding conservation principles, site analysis, accommodation reviews and regular client and design team discussions.

Please also refer to the Stage 2 reports compiled by Integral Engineering Design and E3 Consulting Engineers respectively.

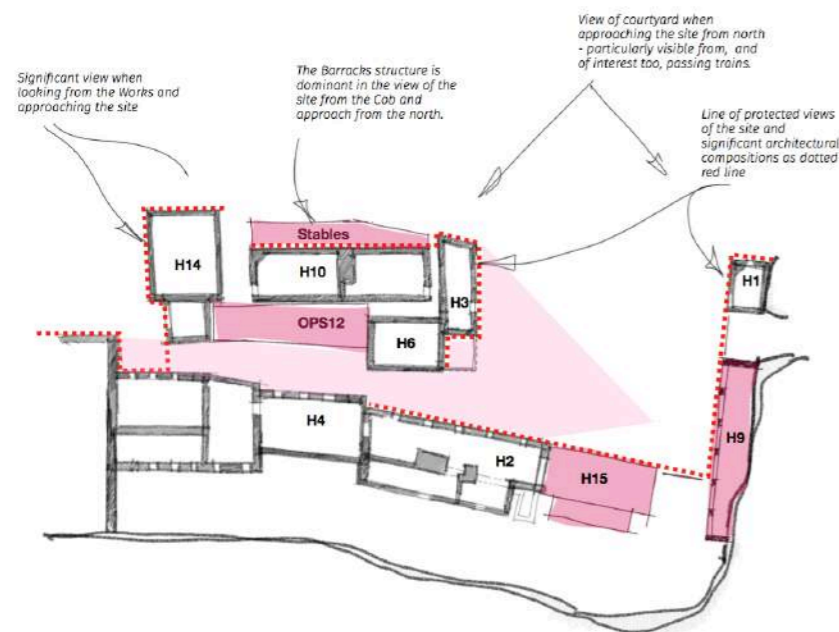
Early opportunities for (re)consideration were discussed and based on the following:

- Significant and Historic Views & Lost Buildings;
- Works, Storage & Operations;
- Mess Room & Works Facilities for Staff and Volunteers;
- Visitors Facilities;
- Office & Residential Provision.

Historic Views and Lost Buildings

The significant views into and within the site (*sketch illustration, left*) guide the design development of the proposed structures.

The FfWHR's aim is to reinstate and protect these historic views which contribute to the site's special character.

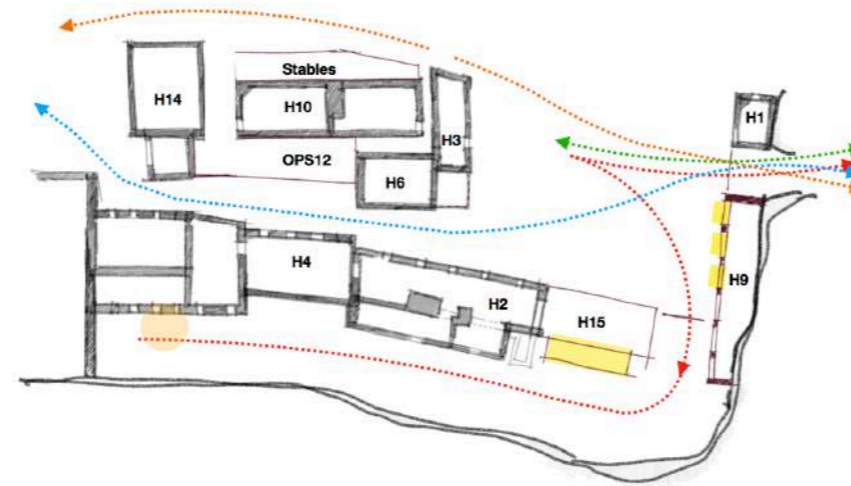


Works, Storage and Operations

Thread's design intention and brief is to enable the site to be secured and understood as a living, breathing and atmospheric working space. In addition, new sensitive, pragmatic and sustainable interventions are required to facilitate the continued unbroken use of this site, as originally intended.

As such, full understanding of the FfWHR's storage and access requirements was required. The proposals seek to improve on the volume of storage available, whilst maximising the use of existing buildings without harming their significance or the protected views of the site. Two skips, a waste oil tank and stackable pallet storage are also required.

The early analysis sketch below illustrates the vehicle movements across the site, including delivery of long lengths of steel and pallets (red); daily small deliveries (green); transit van deliveries - current OPS12 roof often gets hit (blue); and limited controlled access onto railway (orange)



Mess Room and Works Facilities

The design intention is to improve the efficiency of the mess room layout by providing:

- Ease of access when Works staff and volunteers are completing very dirty works;
- Improved access from main working yard;
- Good views of the site during breaks;
- More flexible facilities as the proportion of male and female staff changes;
- New facilities for all - not just the office users.

The proposal to use H14 for this purposes echoes its past use and releases significant space within the ground floor of OPS12 for alternative use.

Visitor Facilities

The Round 1 proposal located the main visitor welcome area at H0 (Old Engine Shed), which is situated a short walking distance from the Top Yard. Although not far from the Top Yard, the Old Engine Shed seems dislocated from the activity of the working site at the rest of Boston Lodge Works.

Thread's proposal to bring the welcome area to the Top Yard (refer to H9 and H15) enables the visitor to start at the beginning, at the heart of Boston Lodge's layered history, to enhance their understanding of the site's history and significance. This does not take away from the proposed interpretation in H0 (Old Engine Shed), but instead will allow visitors to approach H0 on their way back to Boston Lodge Halt, and experience it as if discovering it for the first time.

Office and Residential Provision

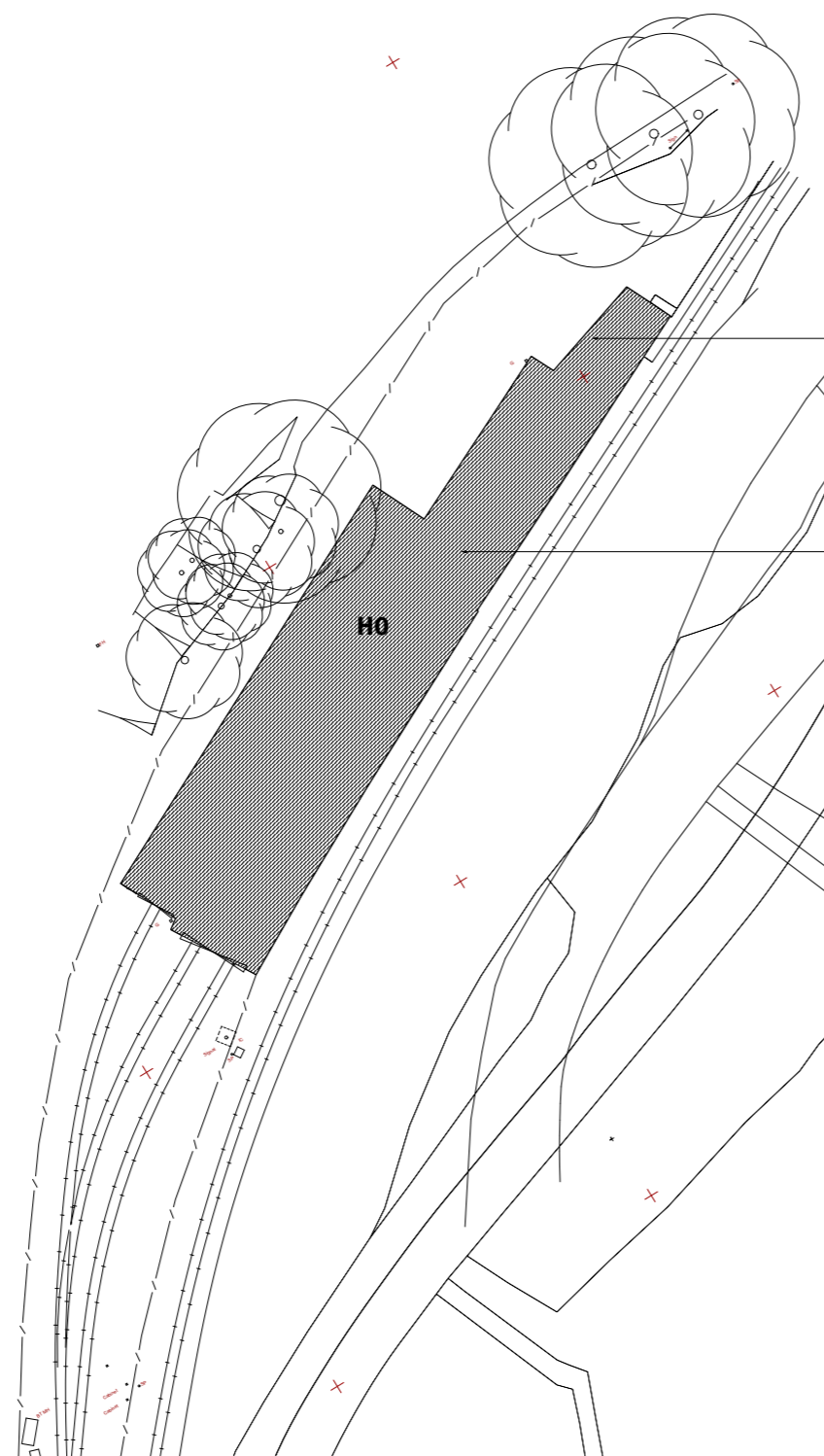
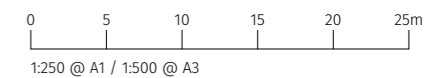
Key aims of the proposal are:

- To concentrate residential and office accommodation in separate areas of H10, with a vertical dividing wall - better for sound and fire proofing requirements;
- To enable flexibility and future-proofing; and
- To reduce the need for a lift - and so reduce costs and physical change.

Thread

Strategic Overview

Site Plans



WEIGH HOUSE
(not currently in scope)
Proposed Use: Not defined but the closest undercover area to visitor arrival.

Could be used for visitor PPE or part of the visitors route.

OLD ENGINE HOUSE
Proposed Use: Visitor interpretation space and engine store

Light touch architecturally - mainly conservation and addressing access and level issues - finale exhibition.

REVISIONS



Client: FWHR
Project Architect: Claire Fear

BOSTON LODGE WORKS

GENERAL SITE STRATEGY
(Part 1 of 2)

Scale:
1:250 @ A1 / 1:500 @ A3

Date:
October 2020

81_GA_01



1:250 @ A1 / 1:500 @ A3

PLAS SMART
Proposed Use: Restored small office/ PPE for visitors as part of experience

OLD OIL STORE
Proposed Use: Visitor WCs, Store & IT/Data

BRASS FOUNDRY
Proposed Use: Storage as existing with Visitor Access

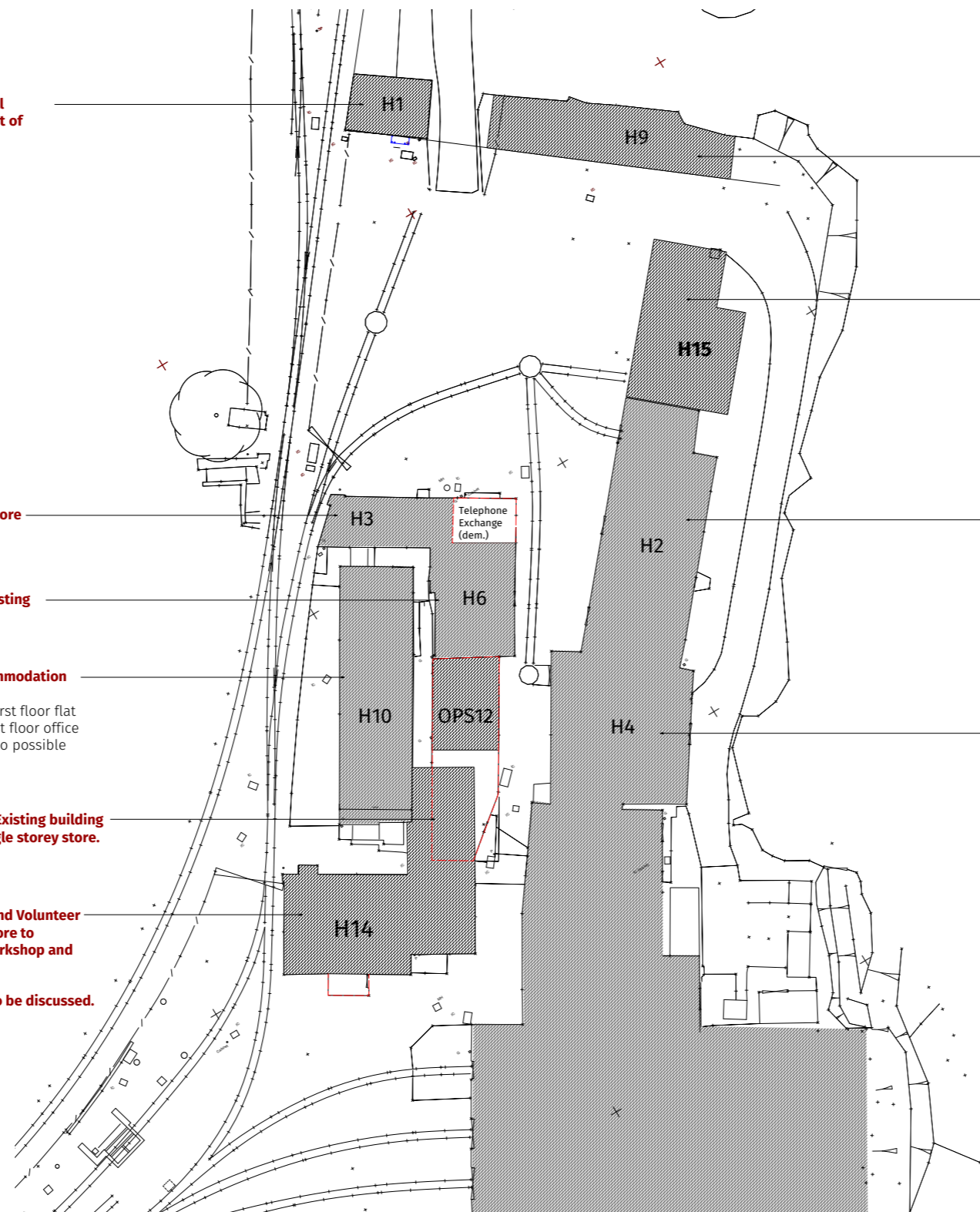
BARRACKS
Proposed Use: Office & Accommodation

Cottage 1 - ground floor flat; first floor flat
 Cottage 2 - Ground floor & first floor office
 Cottage 1 - first floor office also possible

OPS12
Proposed Use: Demolition of Existing building and construction of small single storey store.

THE STORES
Proposed Use: Den, Lockers and Volunteer Facilities. Extended Old Oil Store to accommodate Electricians Workshop and store.

First floor space / store use to be discussed.



WAGON SHED
Proposed Use: Visitor Covered space for introduction and stores.

New construction of earlier Wagon Shed - aligned with H1. Also location of Archaeology.

BLACKSMITHS EXTENSION
Proposed Use: Training Space and pallet storage to the East.

An extension to H2 but thermally separated with the ability to use H2 and H15 together or separate. Also to enable locomotive to park within H15.

SMITHY
Proposed Use: Working volunteer Space with small storage area

Light touch on existing building - with volunteer and visitor access.

IRON FOUNDRY
Proposed Use: Working volunteer Space with retained element of storage

Light touch on existing building - with volunteer and visitor access. Retention of storage cases to the south and west walls.

REVISIONS

Thread

Client: FWHR
 Project Architect: Claire Fear

BOSTON LODGE WORKS

GENERAL SITE STRATEGY
(Part 2 of 2)

Scale:
 1:250 @ A1 / 1:500 @ A3

Date:
 October 2020

81_GA_02

Thread

H0

Old Engine Shed

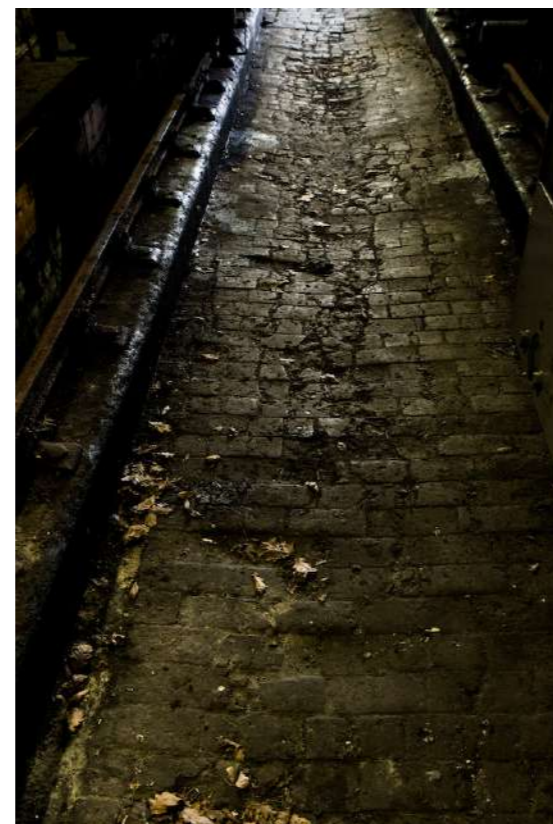


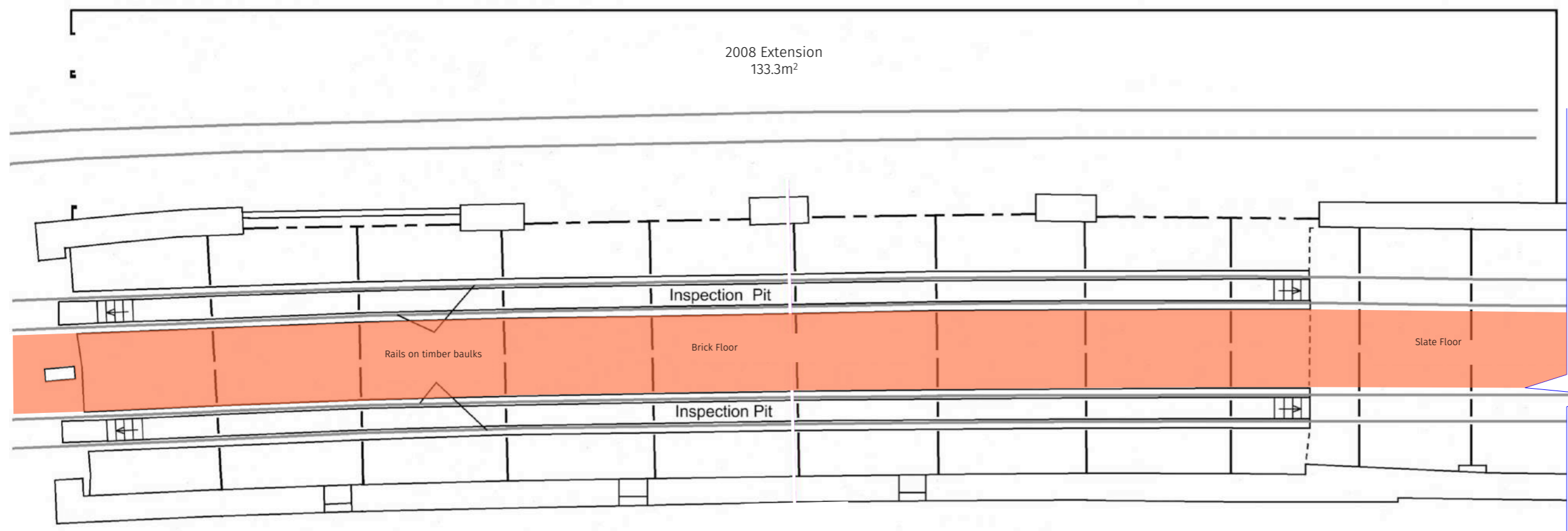
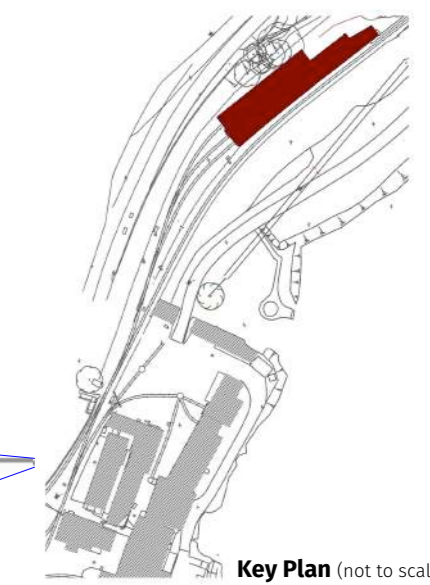
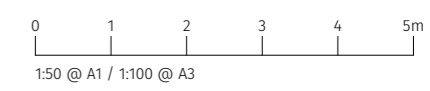
H0 Old Engine Shed & Weigh House

As noted above, the proposal is to bring the visitor welcome area to the Top Yard (refer to H9 and H15). The Old Engine Shed can then be accessed by visitors on their way back to Boston Lodge Halt, entered from the main west entrance - with the full impact of the experience of opening the doors, just as it was experienced when the abandoned site was rediscovered in the 1950s after the Railway's decline, and brought back to life by its dedicated volunteers.


The need for architectural intervention to this building is minimal - restricted to conservation repairs to the floor to assist with accessibility, light touch conservation, and M&E installations to better illuminate the engines. The majority of the work here will be part of the interpretation.

Refer to drawing 81_H0_01.



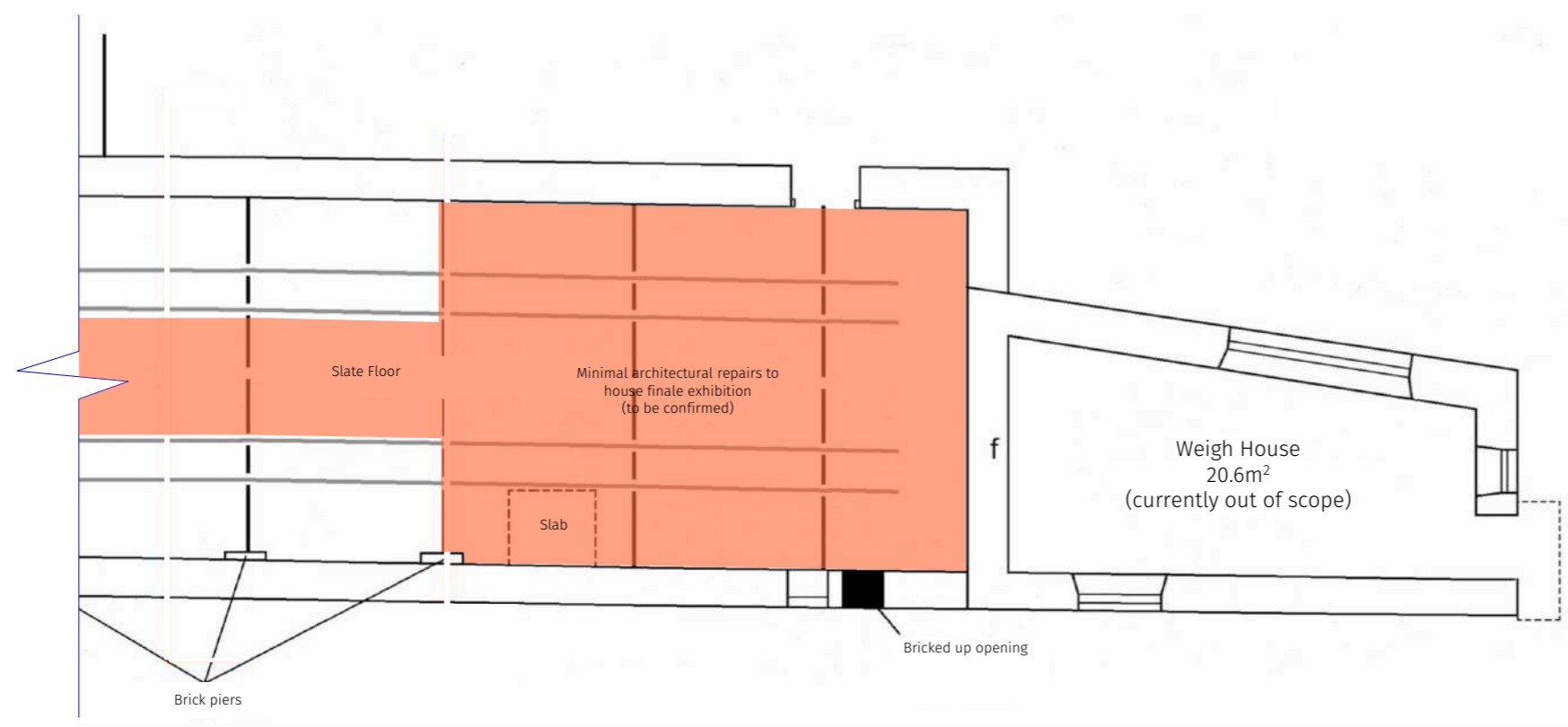


Existing Ground Floor Plan
Scale 1:50 @ A1 / 1:100 @ A3

Key:
 Repairs to existing floor to enable safe and level access for visitors (approx 107m²)

Note:
Scaled drawings of existing taken from Historic Building Assessment (Bancroft Heritage/Zeeppvat)

REVISIONS _____



Existing Ground Floor Plan - Weigh House
Scale 1:50 @ A1 / 1:100 @ A3

Thread

Client: FWHR
Project Architect: Claire Fear
BOSTON LODGE WORKS

**HO OLD ENGINE SHED
EXISTING PLAN AND
PROPOSED LAYOUT**

Scale:
1:50@A1 / 1:100@A3
Date:
OCTOBER 2020

81_H0_01

Thread

H1

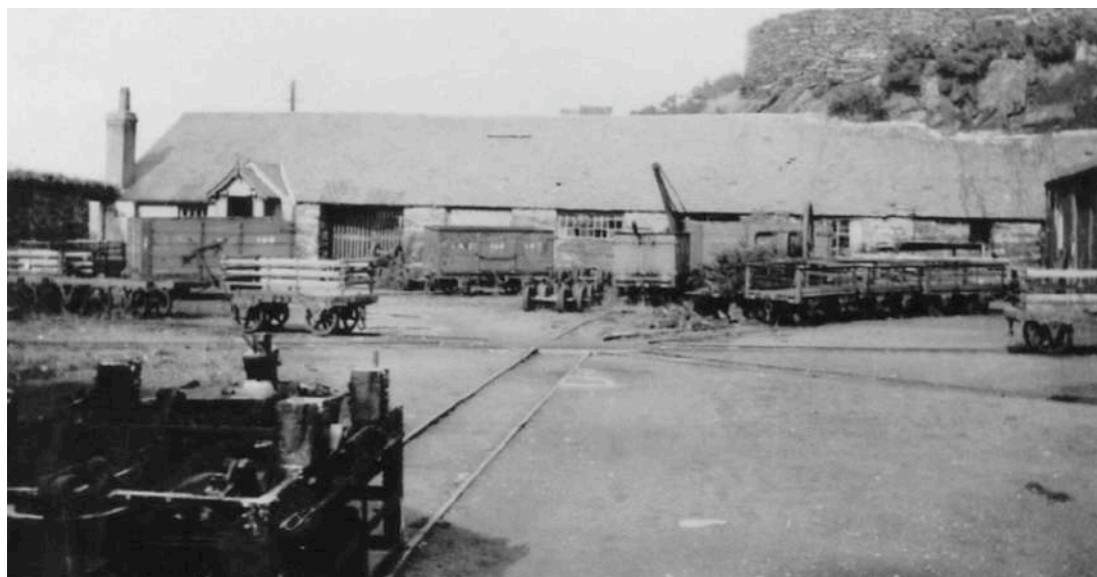
Plas Smart



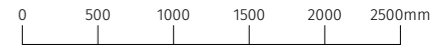
H1 Plas Smart (Superintendent's Office)

This building was previously partially restored (external only). The floor, internal partition and internal joinery were previously removed and it currently contains no services. The intention is to complete conservation and repair works to enable this characterful little space, with its cast iron fireplace, to be used as a potential heated office space, a nod to its previous use as the Superintendent's Office or as a collection point for visitors' PPE as part of their tour. Further options for its function may still be considered.

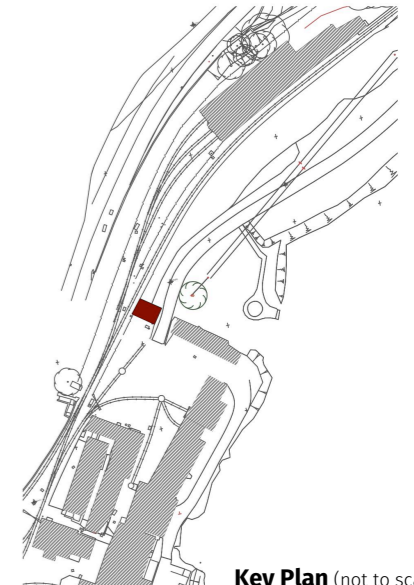
Refer to drawing 81_H1_01 for survey of existing.



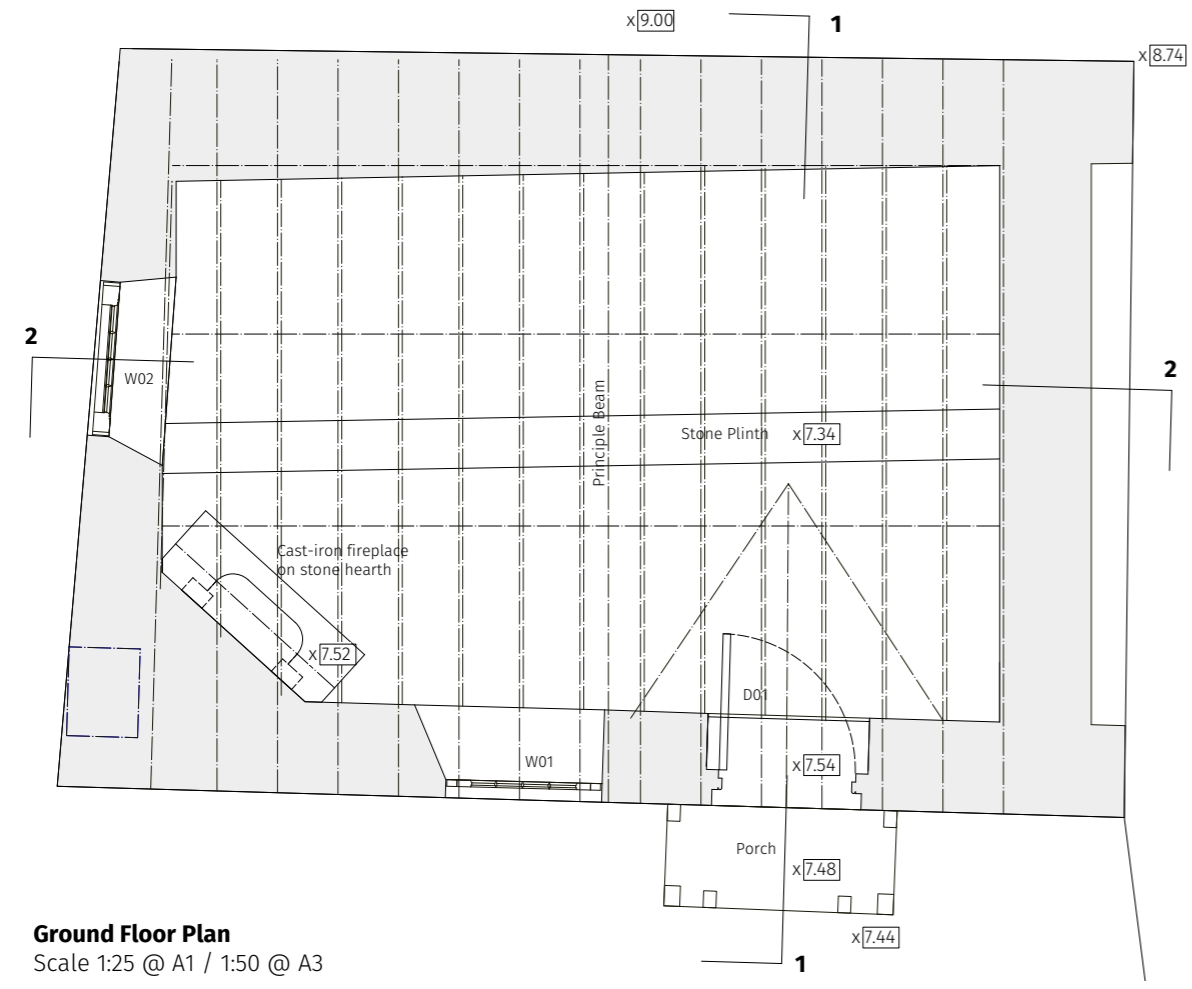
Plas Smart as part of the Wagon Shed, post 1881 (FR Archives)



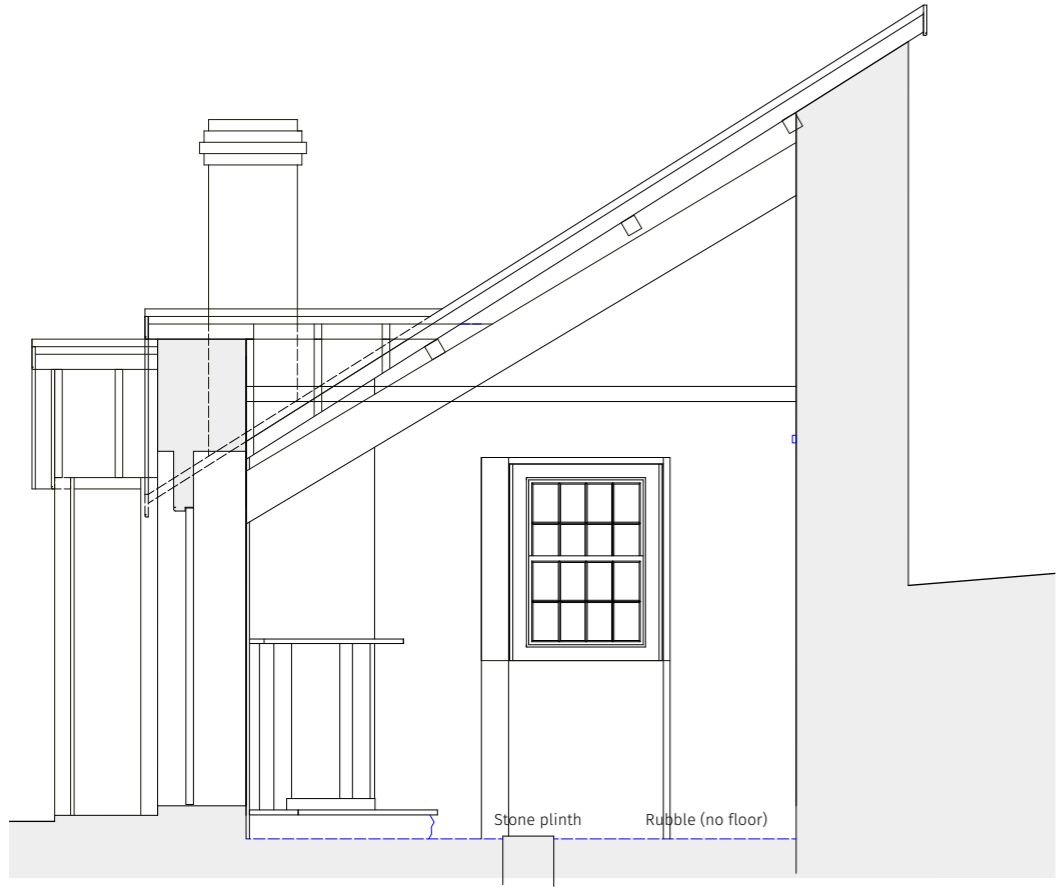
1:25 @ A1 / 1:50 @ A3



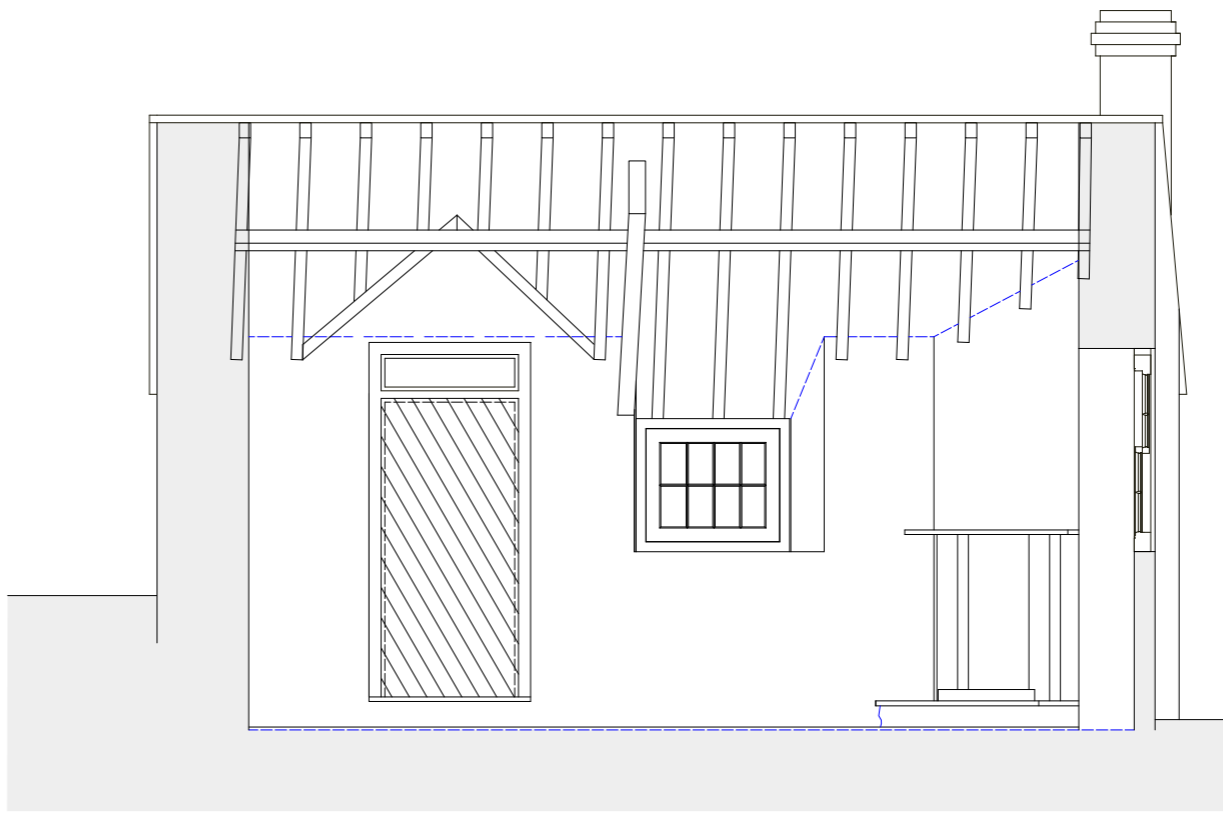
Key Plan (not to scale)



Ground Floor Plan
 Scale 1:25 @ A1 / 1:50 @ A3



Section 1
 Scale 1:25 at A1/ 1:50 @ A3



Section 2
 Scale 1:25 @ A1 / 1:50 @ A3

REVISIONS

Thread

Client: FWHR
 Project Architect: Claire Fear
 BOSTON LODGE WORKS

**H1 PLAS SMART
 EXISTING PLAN
 AND SECTIONS**

Scale:
 1:25@A1 / 1:50@A3
 Date:
 OCTOBER 2020

81_H1_01

Thread

H2

Smithy



H2 Smithy (Blacksmiths)

The Smithy was recently comprehensively repaired, including full roof repairs and the reinstatement of the historic chimneys and roof ventilators. The proposed architectural works are therefore minimal, with the intention of providing a flexible, practical space that can be used by volunteers in support of the Railway's activities and historic use.

Two areas, in the lower lean-to space to the south of the building have been identified as storage areas, for the following reasons:

- They can be visually separated from the main space;
- They are dark, relatively narrow spaces which do not lend themselves to working areas;
- They can be directly accessed from the southern vehicular access route behind the building.

A small portion of the least accessible of these two storage areas will be dedicated to bats, as part of the ecological mitigation of the site.

Refer to drawings 81_H2_01-02.



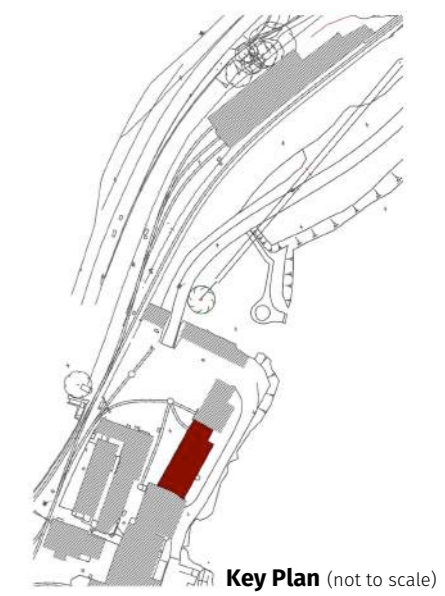
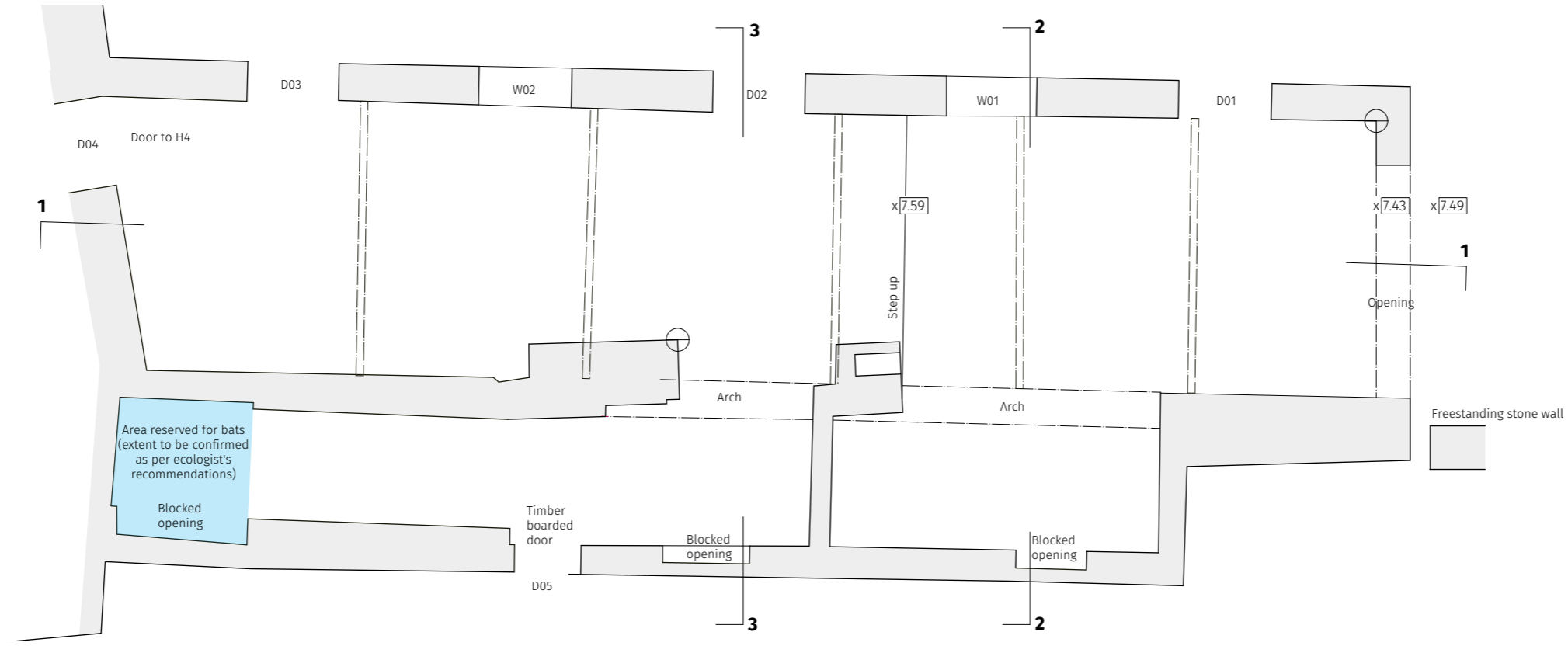
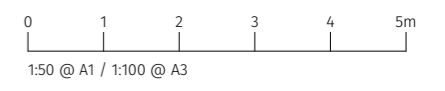


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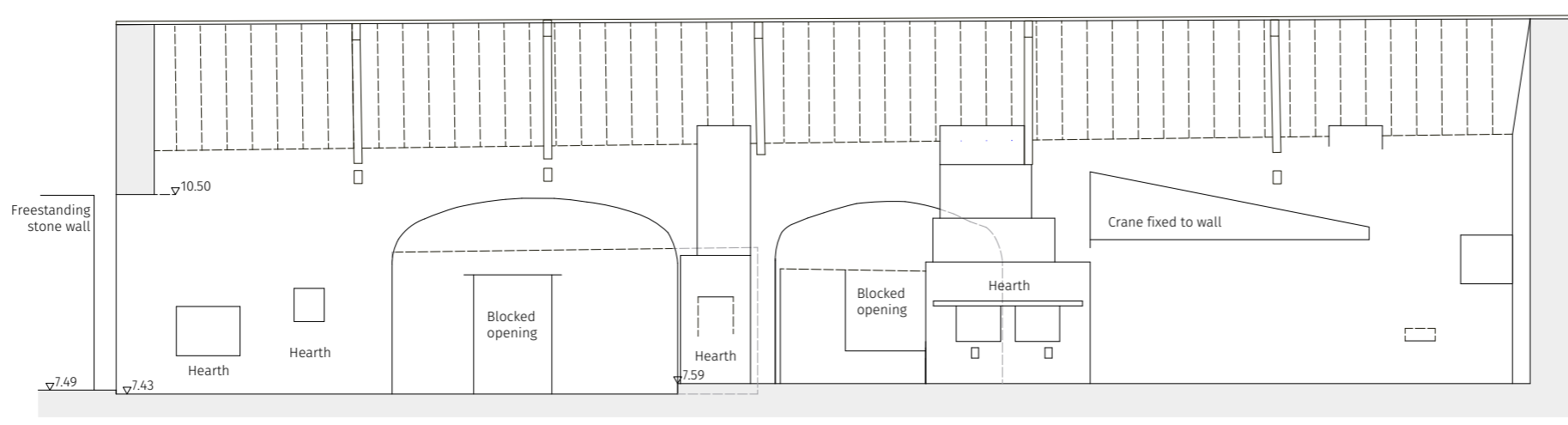
Do not scale from this drawing, other than for the purposes of the Town and Country Planning Act.

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Ground Floor Plan
 Scale 1:50 @ A1 / 1:100 @ A3

REVISIONS



Section 1
 Scale 1:50 @ A1 / 1:100 @ A3

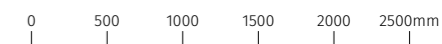


Client: FWHR
 Project Architect: Claire Fear
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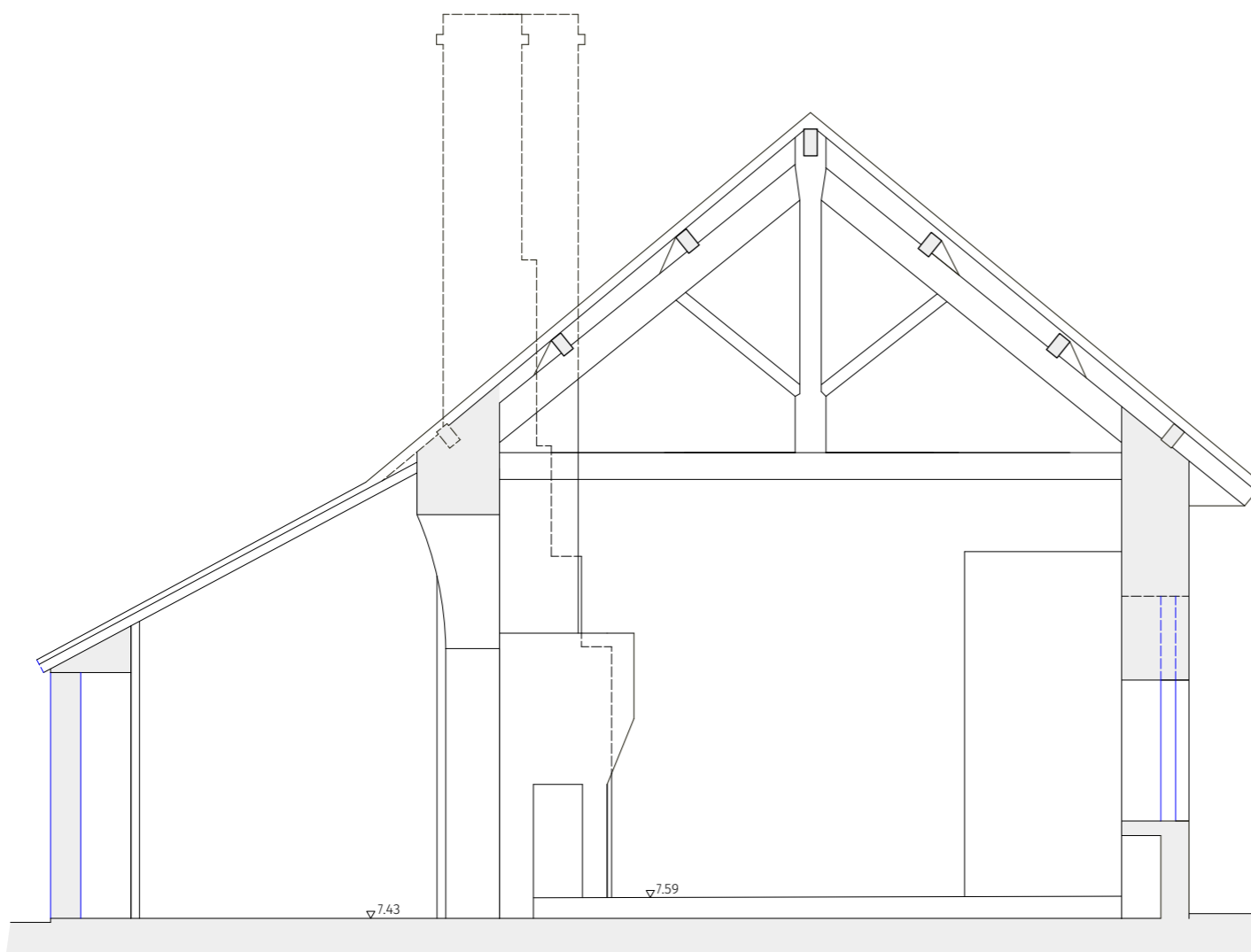
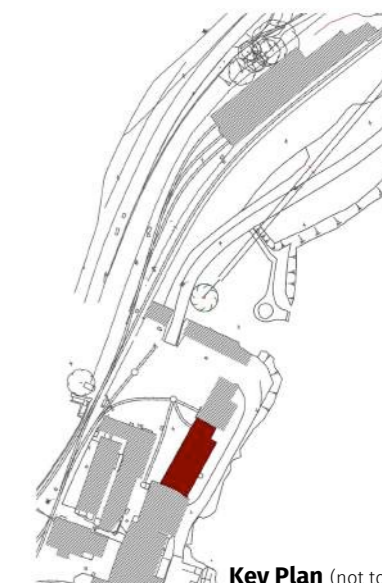
**H2 BLACKSMITHS
 EXISTING PLAN &
 LONG SECTION**

Scale:
 1:50@A1 / 1:100@A3
 Date:
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81_H2_01



1:25 @ A1 / 1:50 @ A3



Section 2
Scale 1:25 @ A1 / 1:50 @ A3

REVISIONS

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Client: FWHR
Project Architect: Claire Fear

BOSTON LODGE WORKS

**H2 BLACKSMITHS
EXISTING SECTIONS**

Scale:
1:25@A1 / 1:50@A3

Date:
OCTOBER 2020

81_H2_02

Thread

H3

Old Oil Store

H3 Old Oil Store

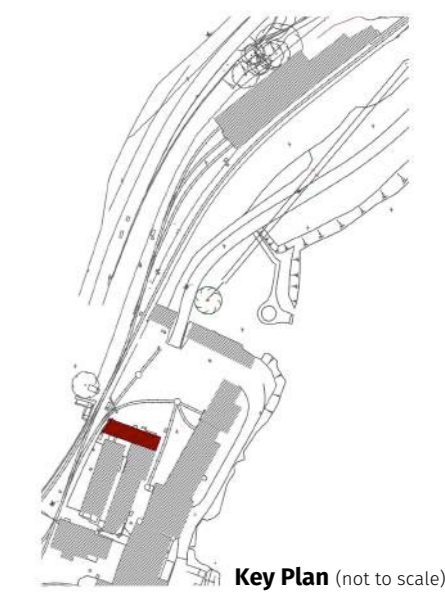
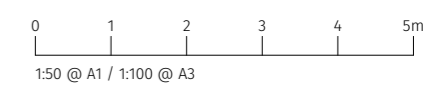
Careful consideration was given to whether the Old Telephone Exchange structure should be demolished as per the Round 1 proposal. It was built in the 1970s to house the Strowger Telephone Exchange, which has since been removed and is located in the Beamish Museum. Without this equipment, the modern structure has little heritage significance, and detracts from the historic views of the Top Yard.

Its demolition enables the reinstatement of the east window to H6 (Brass Foundry) and the southern door into H3. This allows for external access to a new visitor/contractor WC. Only conservation repairs are proposed to the exterior of H3, whilst inside, a new insulated timber-framed lining will enclose the new visitor WC, Accessible WC, storage and IT/data room - all of which are ideally located for connection to existing services.

Refer to drawing 81_H3_01.



Top: Old Oil Store as seen today, with 1970s Telephone Exchange structure
 Bottom: Old Oil Store in the 1950s, before the Telephone Exchange was built
 (Norman Pearce in Bancroft Heritage Services HBA, 2015)



Note:
Scaled drawings of existing taken from
Historic Building Assessment
(Bancroft Heritage/Zeeprvat)

REVISIONS

REV A (5 Nov 2020) - WC layout revised to include IT/data room



Client: FWHR
Project Architect: Claire Fear
BOSTON LODGE WORKS

**H3 OLD OIL STORE
EXISTING PLAN AND
PROPOSED LAYOUTS**

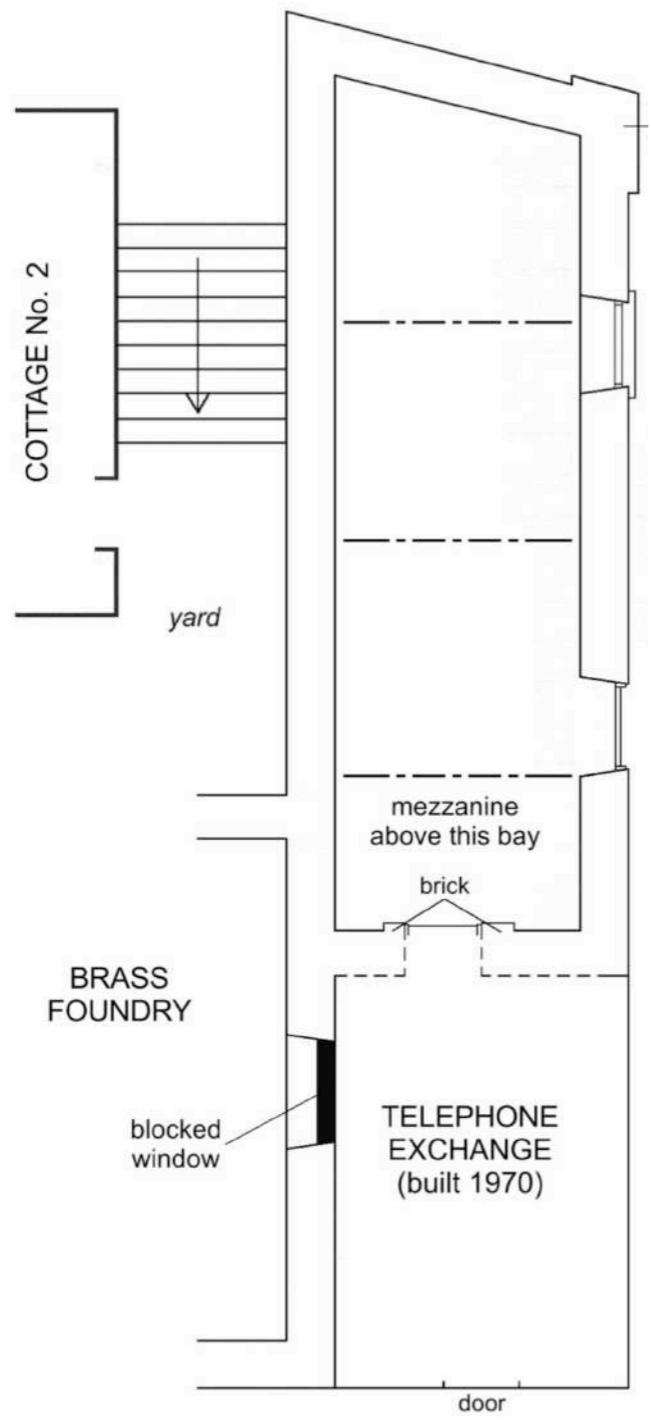
Scale:
1:50@A1 / 1:100@A3
Date:
OCTOBER 2020

81_H3_01 A

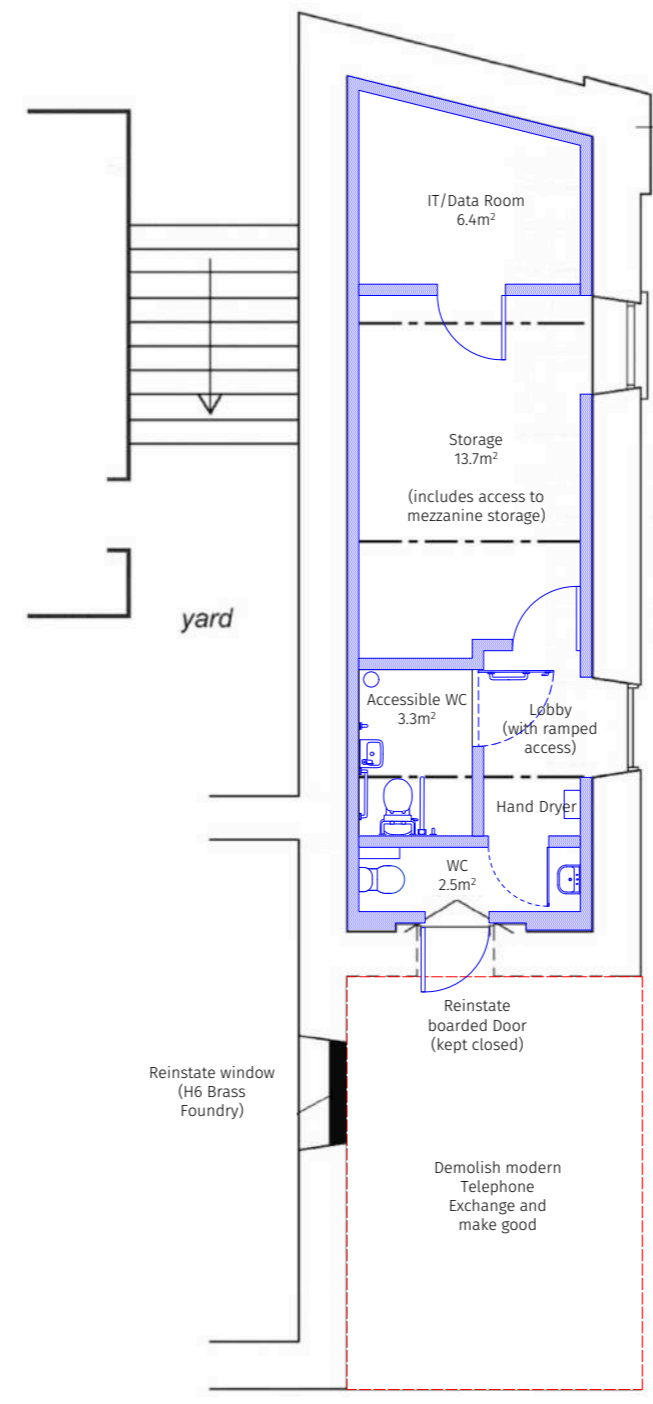
Achieves:

- 5.8m2 Visitor Toilet Facilities on ground floor
- 13.7m2 Ground Floor Storage
- 6.4m2 IT/Data Room
- Potential Mezzanine Storage above (ladder access)

- 1no. Accessible WC (Part M compliant)
- 1no. WC (unisex)



Existing Plan
Scale 1:50 @ A1 / 1:100 @ A3

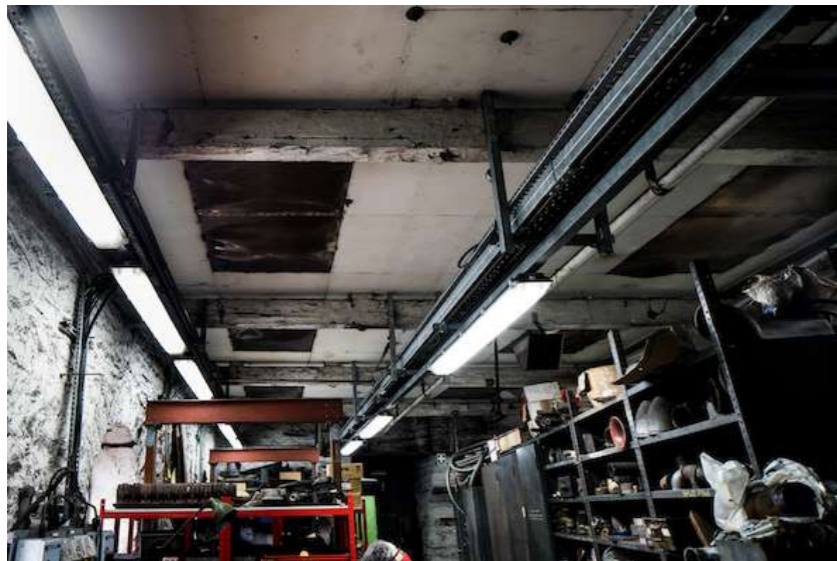


Proposed Visitor WC and Store Plan
Scale 1:50 @ A1 / 1:100 @ A3

Thread

H4

Iron Foundry

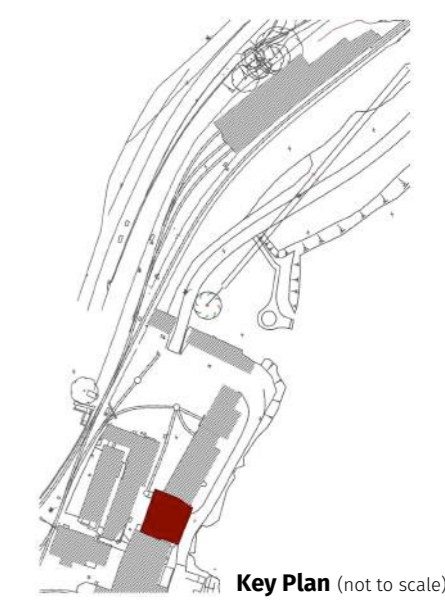


H4 Iron Foundry

The proposed architectural intervention is minimal, except for the removal of the modern ceiling to expose the historic timber roof structure, and to better reveal the construction at the site of the removed cupola, once an integral component of the working Iron Foundry.

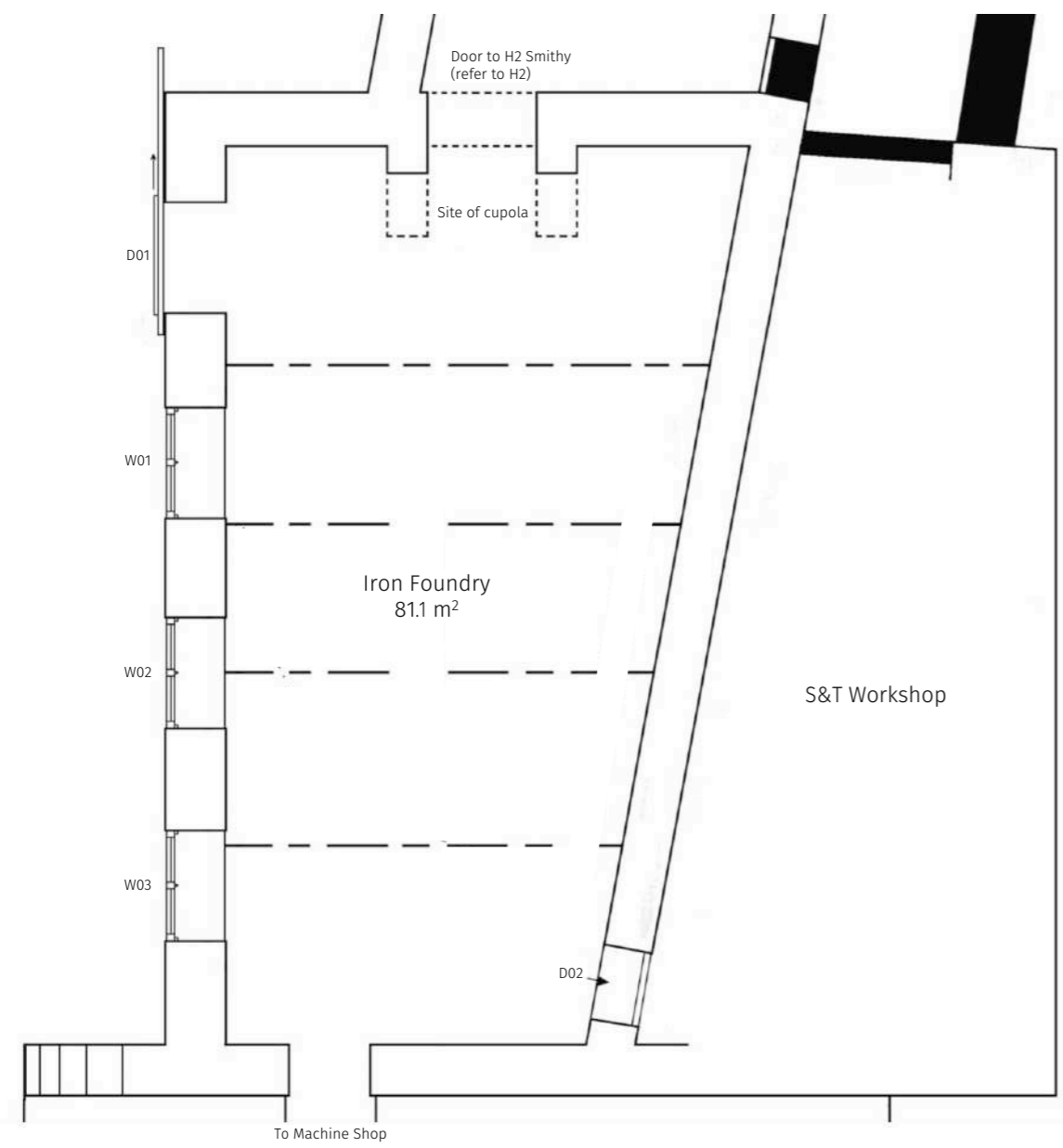
Due to its proximity to the Machine Shop, a row of storage racks is proposed on the south wall to ensure ease of access and maintain flexibility of use for the remainder of the space by leaving it open for workshop use.

Refer to drawing 81_H4_01.

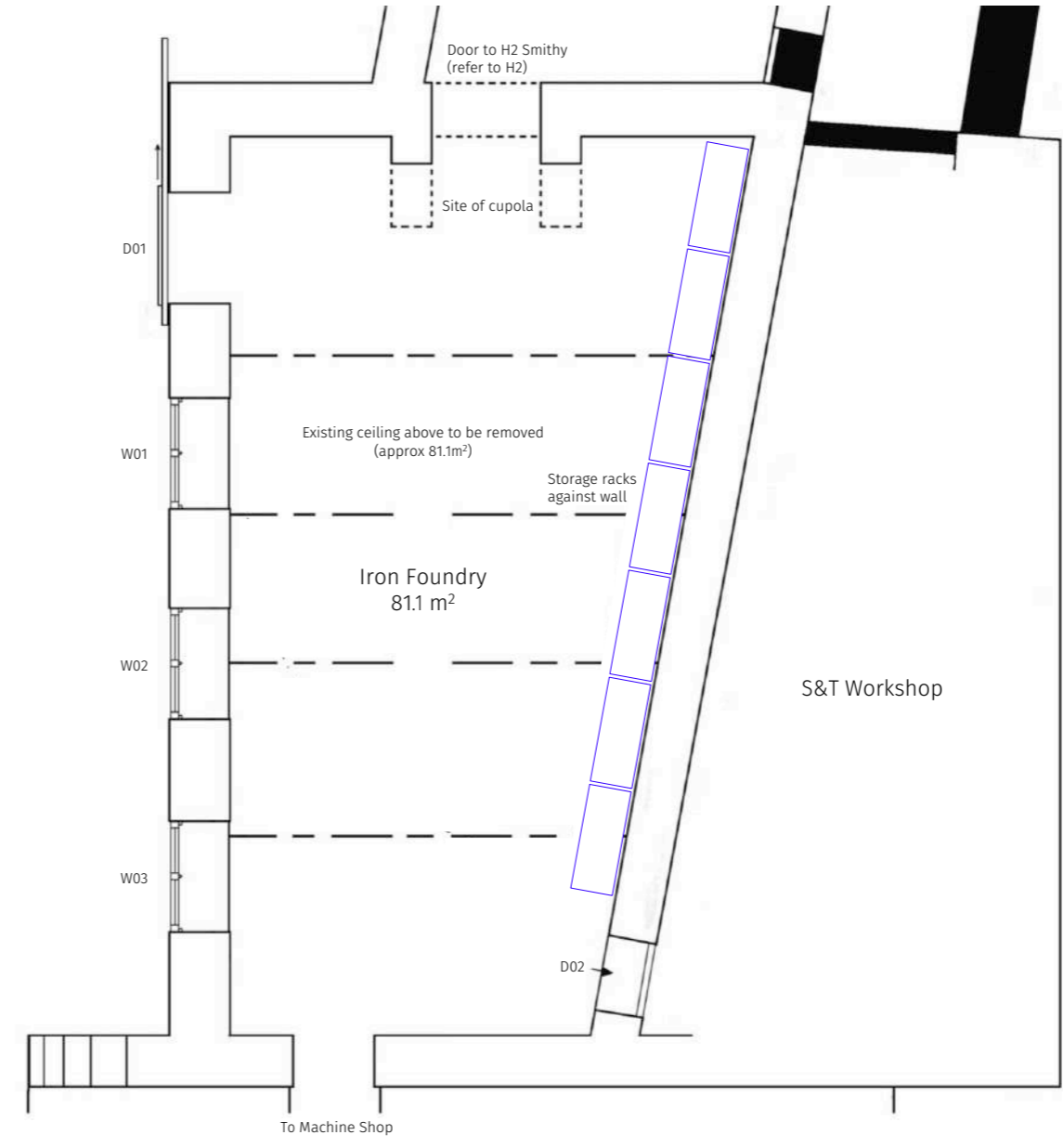


Note:
 Scaled drawings of existing taken from
 Historic Building Assessment
 (Bancroft Heritage/Zeeprat)

REVISIONS _____



Existing Plan
 Scale 1:50 @ A1 / 1:100 @ A3



Proposed Plan
 Scale 1:50 @ A1 / 1:100 @ A3

Thread

Client: FWHR
 Project Architect: Claire Fear
 BOSTON LODGE WORKS

**H4 IRON FOUNDRY
 EXISTING PLAN AND
 PROPOSED LAYOUT**

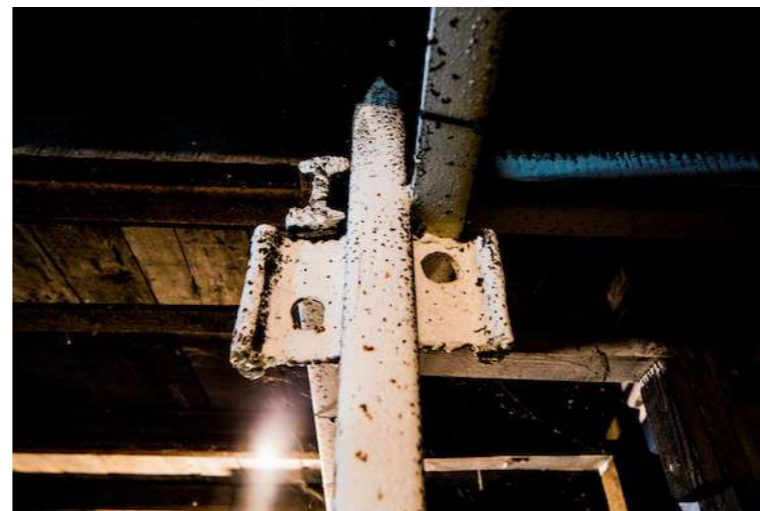
Scale:
 1:50@A1 / 1:100@A3
 Date:
 OCTOBER 2020

81_H4_01

Thread

H6

Brass Foundry



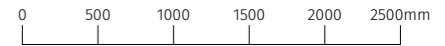
H6 Brass Foundry

Although no longer used for its earlier purpose as a brass foundry, this building has evolved into a unique home for a collection of railway artefacts and components. Its special character is seen also in the bespoke reuse of rails to form the structural posts and beams which support the upper floor and metal shelving which holds these artefacts.

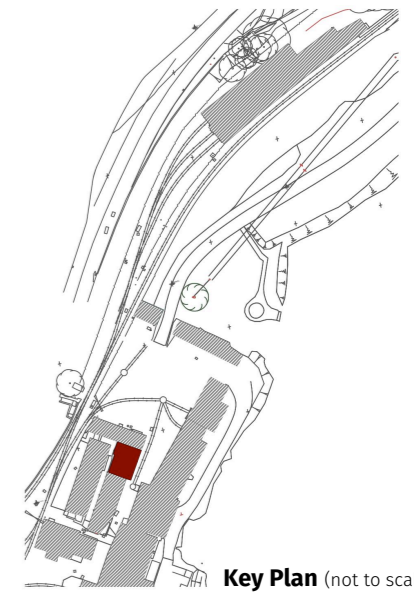
This forms part of the Railway's story, and the intention is to retain this internal structure, with minimal conservation and repairs to the building, so that visitors can see this collection as part of their tour of Boston Lodge.

The staircase to the upper floor is however very steep and not readily accessible for the average visitor - an alternative visitor experience is proposed through the provision of a periscope, constructed in-house, so that visitors can view specific items upstairs. This approach will restrict access to the upper floor and reduce the need for structural changes.

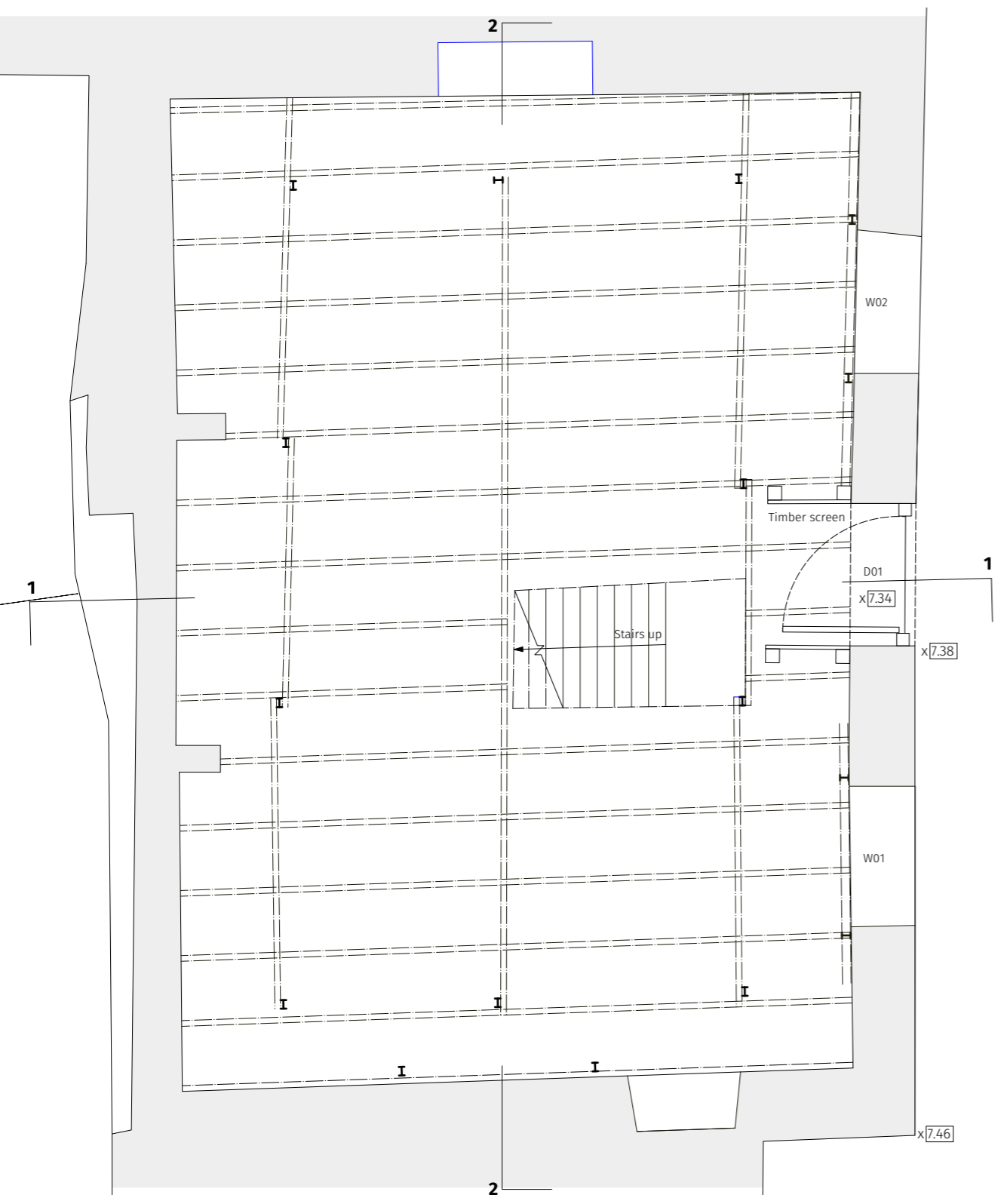
Refer to drawings 81_H6_01-03 (survey of existing).



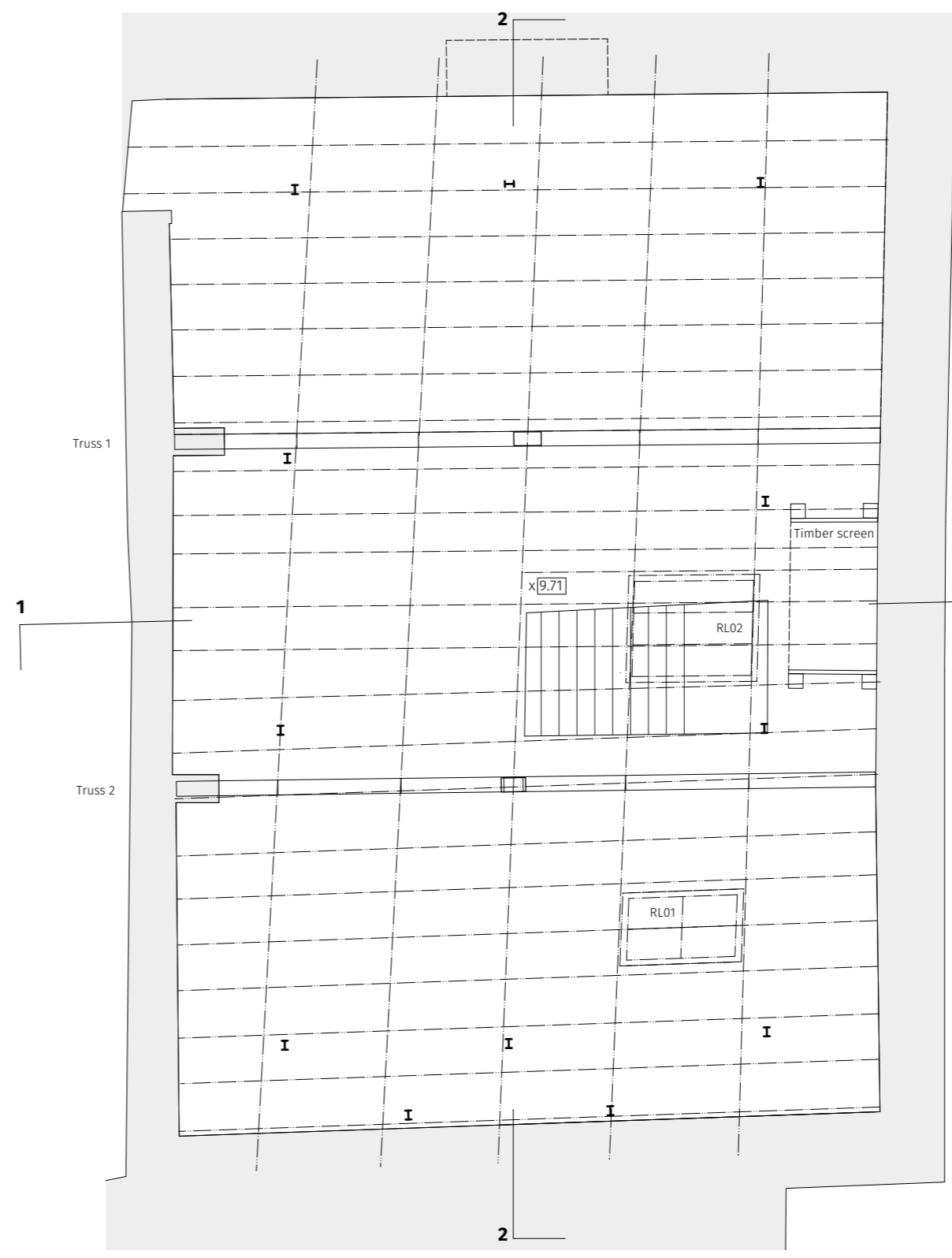
1:25 @ A1 / 1:50 @ A3



Key Plan (not to scale)



Ground Floor Plan
 Scale 1:25 @ A1 / 1:50 @ A3



Mezzanine Floor Plan
 Scale 1:25 @ A1 / 1:50 @ A3

REVISIONS

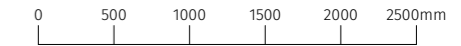


Client: FWHR
 Project Architect: Claire Fear
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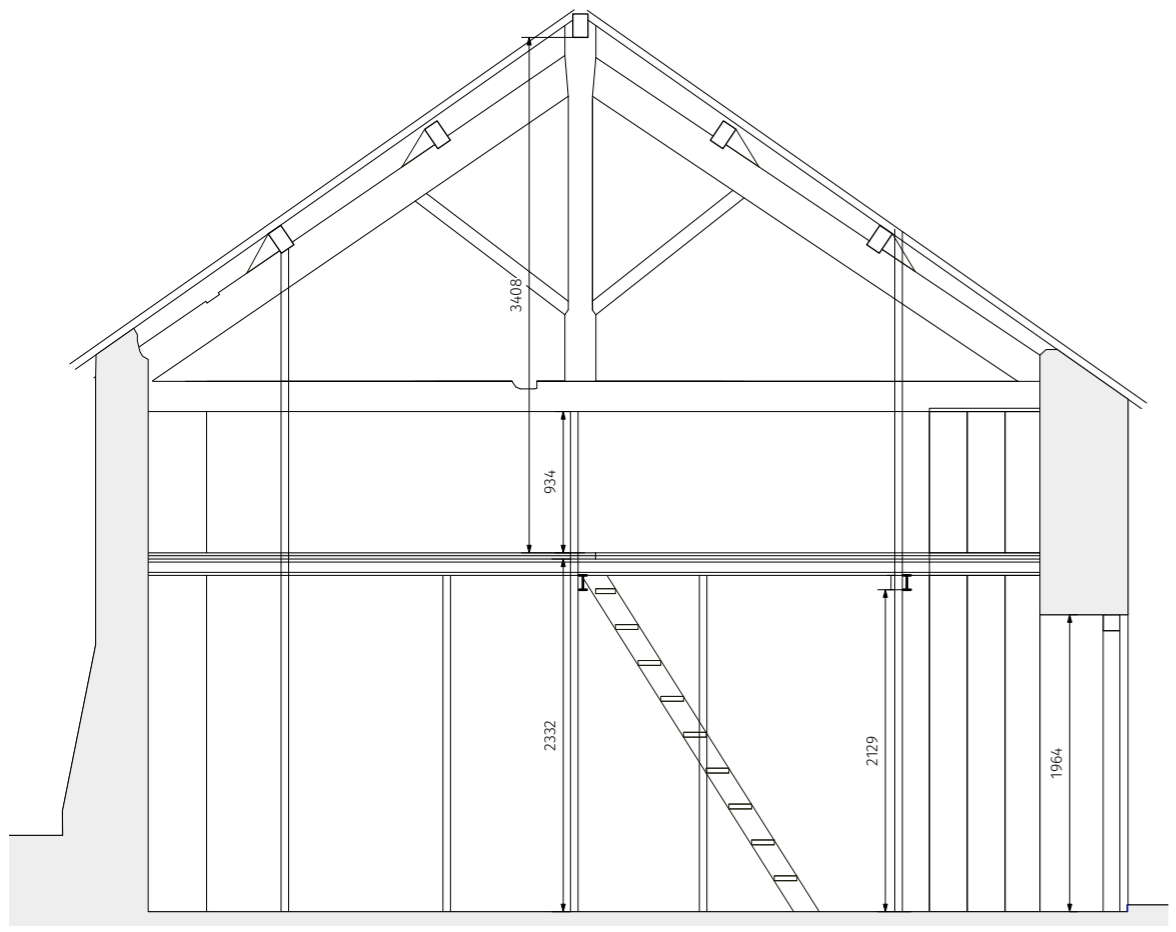
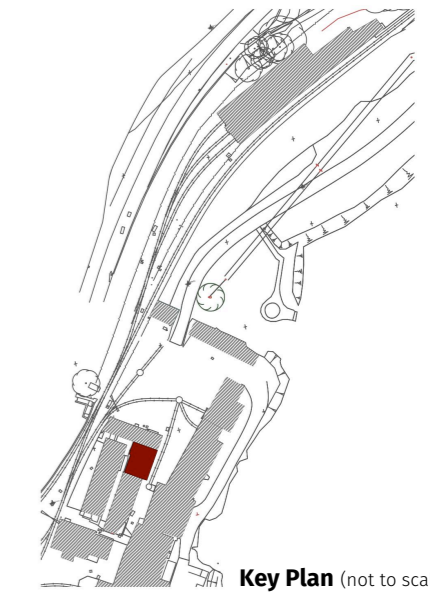
**H6 BRASS FOUNDRY
 EXISTING FLOOR PLANS**

Scale:
 1:25@A1 / 1:50@A3
 Date:
 OCTOBER 2020

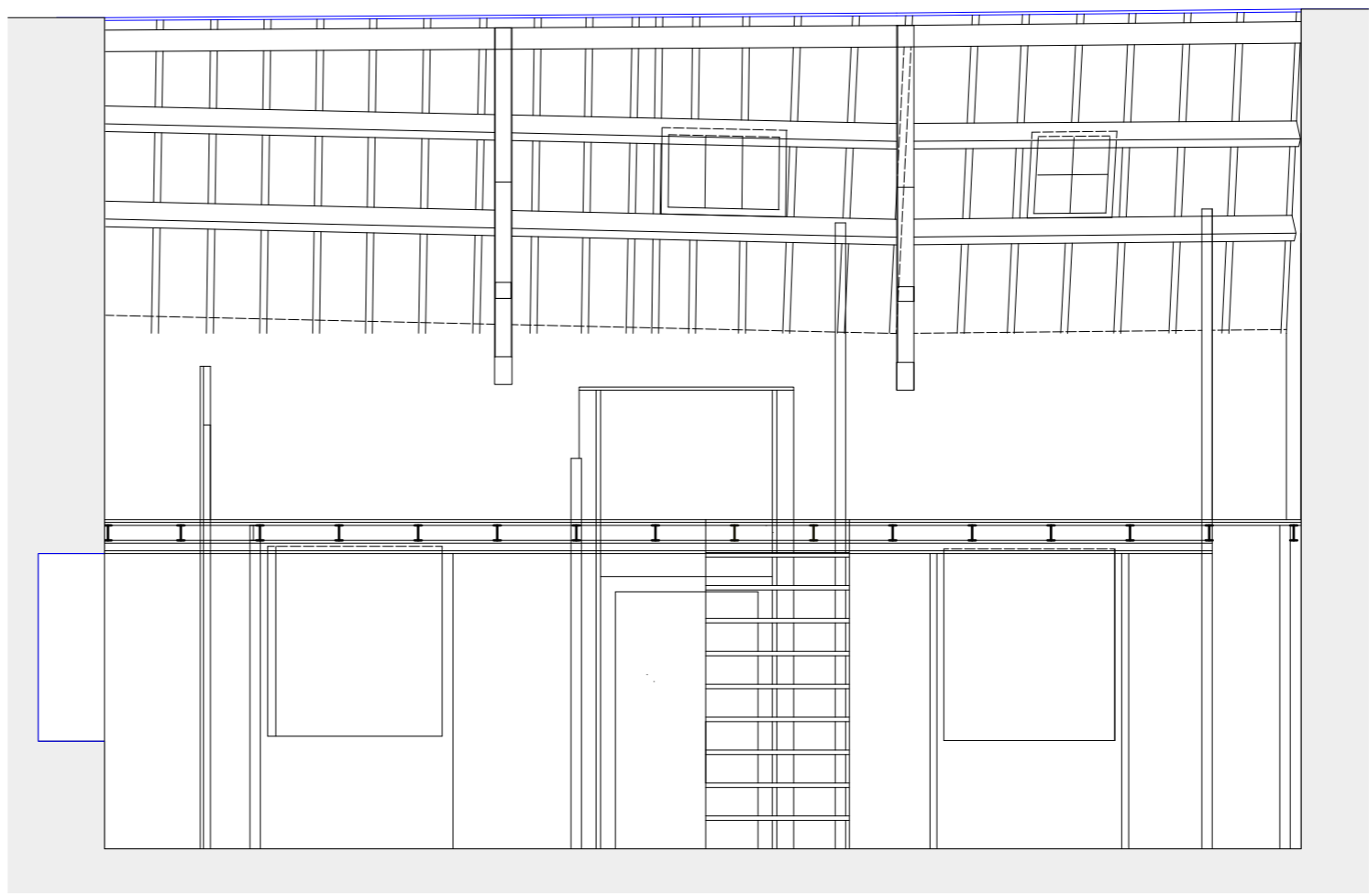
81_H6_01



1:25 @ A1 / 1:50 @ A3



Section 1
 Scale 1:25 @ A1 / 1:50 @ A3



Section 2
 Scale 1:25 @ A1 / 1:50 @ A3

REVISIONS

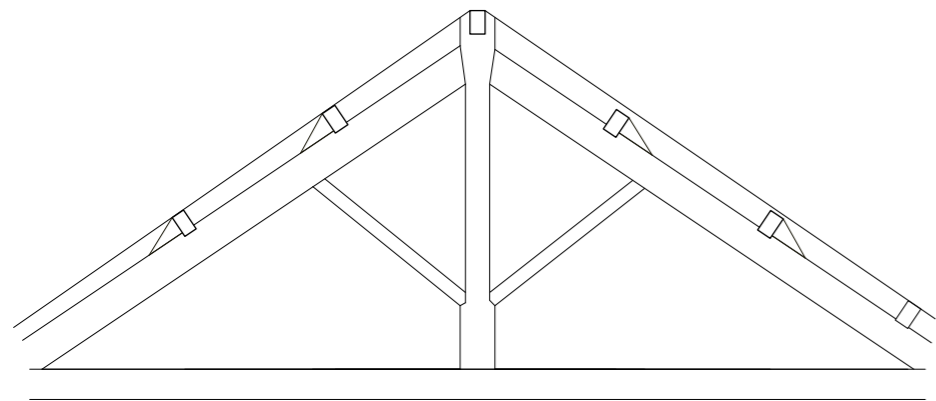
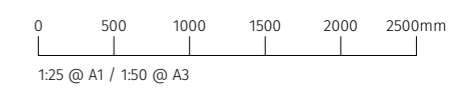


Client: FWHR
 Project Architect: Claire Fear
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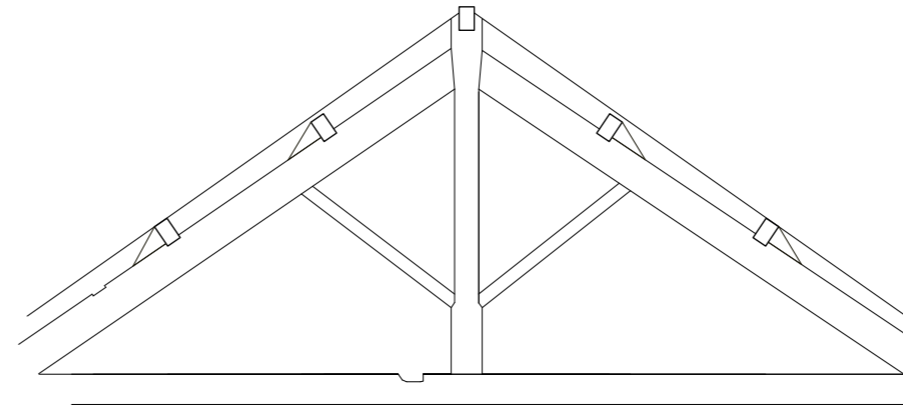
**H6 BRASS FOUNDRY
 EXISTING SECTIONS**

Scale:
 1:25@A1 / 1:50@A3
 Date:
 OCTOBER 2020

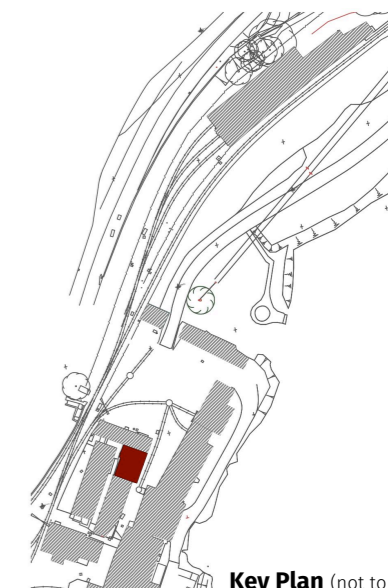
81_H6_02



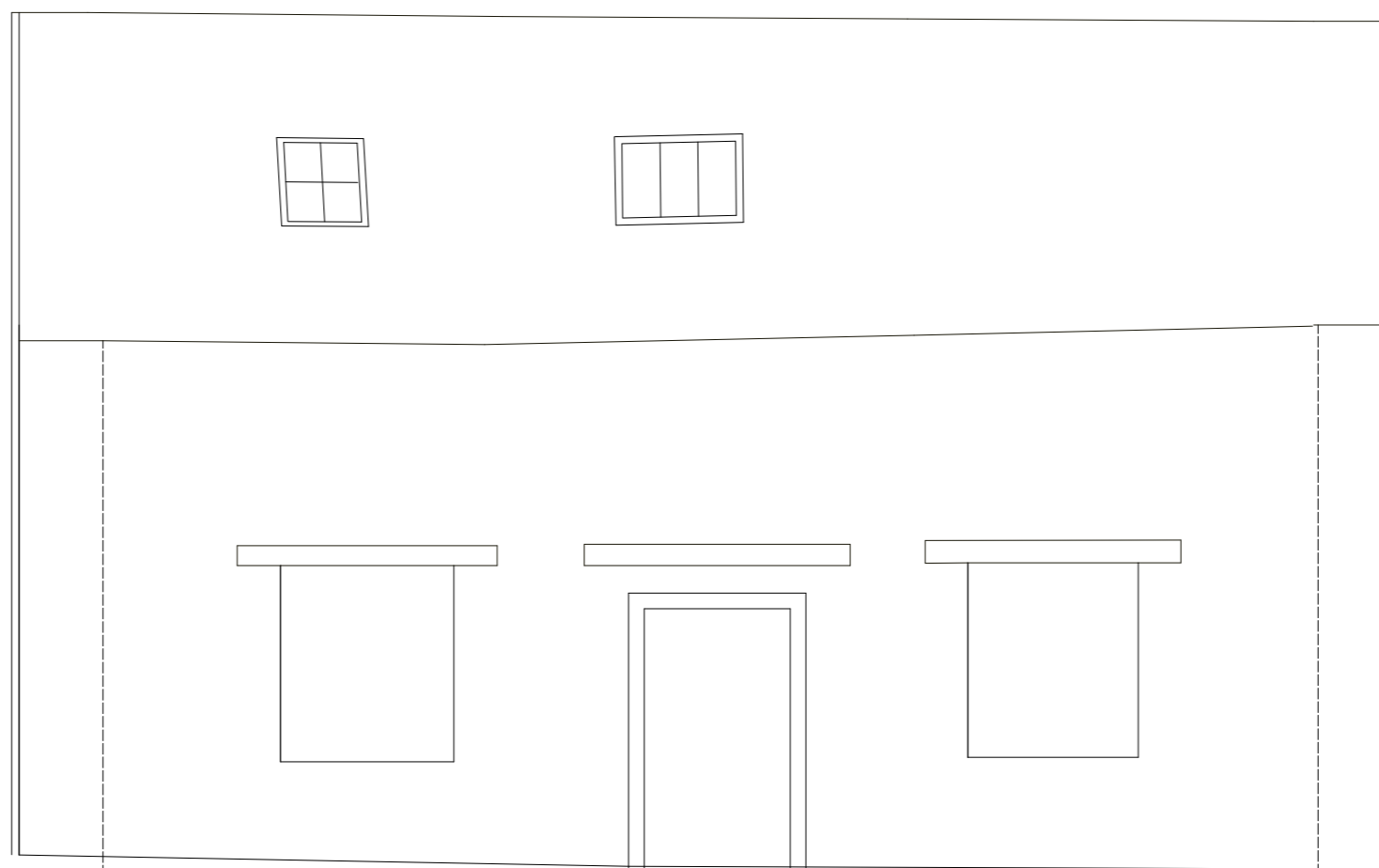
Truss 1 (looking towards Truss 2)
 Scale 1:25 @ A1 / 1:50 @ A3



Truss 2 (looking towards Truss 1)
 Scale 1:25 @ A1 / 1:50 @ A3



Key Plan (not to scale)



Main Elevation
 Scale 1:25 @ A1 / 1:50 @ A3

REVISIONS _____



Client: FWHR
 Project Architect: Claire Fear

BOSTON LODGE WORKS

**H6 BRASS FOUNDRY
 EXISTING TRUSSES &
 MAIN ELEVATION**

Scale:
 1:25@A1 / 1:50@A3

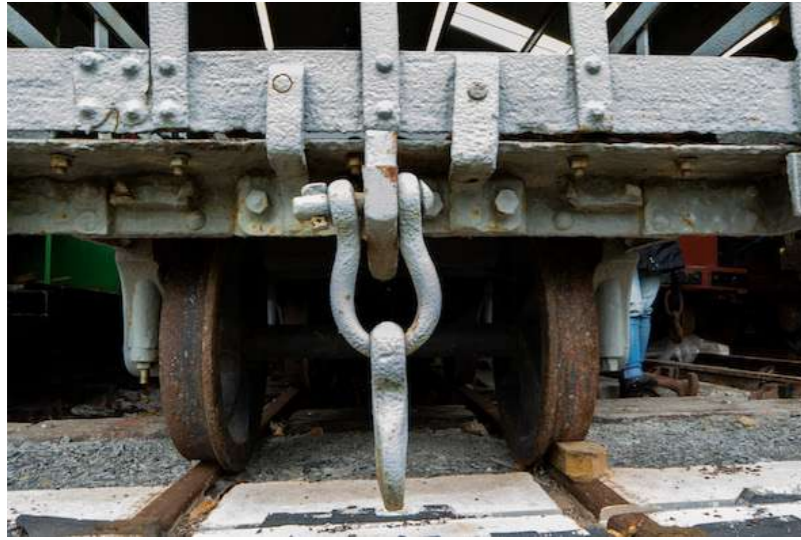
Date:
OCTOBER 2020

81_H6_03

Thread

H9

Wagon Shed



H9 Wagon Shed (Wagon Repair Shop)

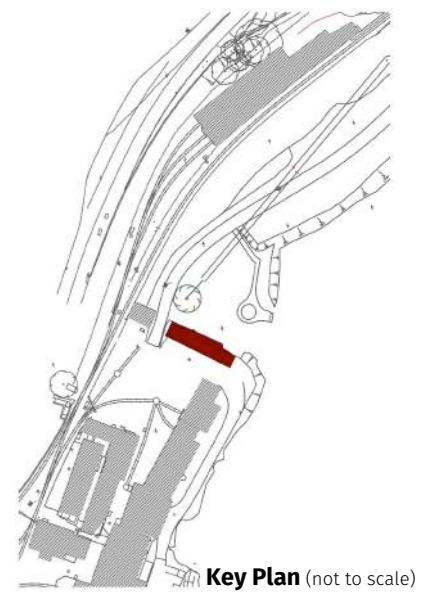
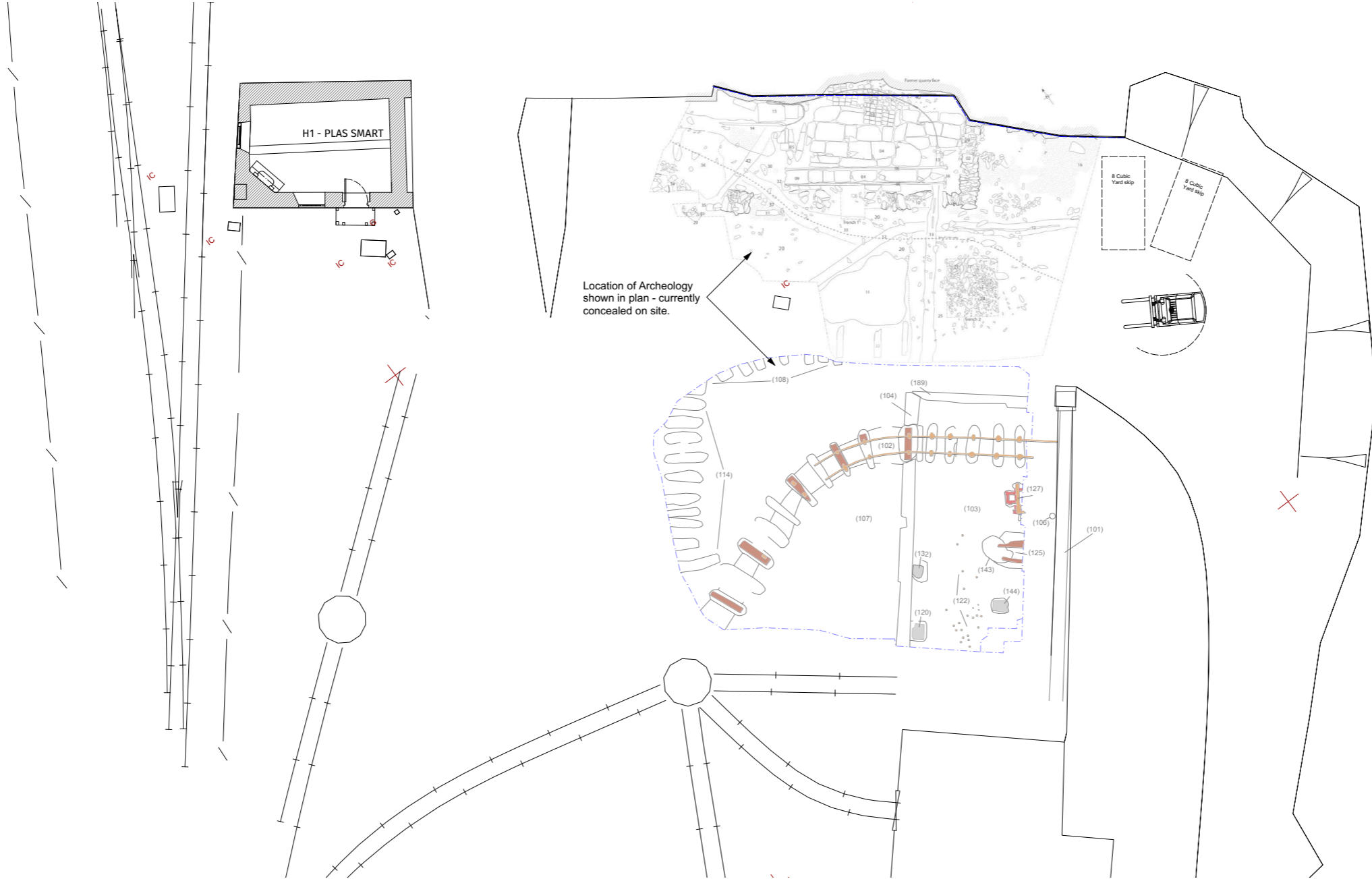
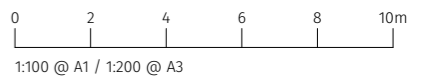
Historic view and lost building - the Round 1 proposals reinstate this building's facade to be similar to the photos from the 1930s. The evidence of the earlier form of this building as an open fronted Wagon Shed can be seen in historic photos (*refer to drawings*) and is discussed in the Historic Building Assessments for the site and Archaeological report on the excavations in this area in 2015. There are also significant archeological finds in this area, which have been protected (and hidden) by the surface layers built up above them.

Given this Thread examined possible uses for the building which would enable this more open fronted form of building to be reinstated so that the historic views of the Top Yard and its days as a hub of slate transport and slate wagon repairs can be better understood by visitors.

The existing Plas Smart building and roof structure, and the visible remains of where the Wagon Shed's roof once joined into the quarry face provided good evidence of the required new structure, while an analysis of historical photographs enabled the setting out of the masonry piers and bays of the main elevation.

Refer to drawings 81_H9_00-04.





Thread

Client: FWHR
 Project Architect: Claire Fear
 BOSTON LODGE WORKS

**WAGON SHED
 EXISTING PLAN**

Scale:
1:100 @ A1 / 1:200 @ A3
 Date:
OCTOBER 2020

81_H9_00

The Aesthetic of the Proposals has been informed by the following observations from this photo, and others as available. The key elements are highlighted here.

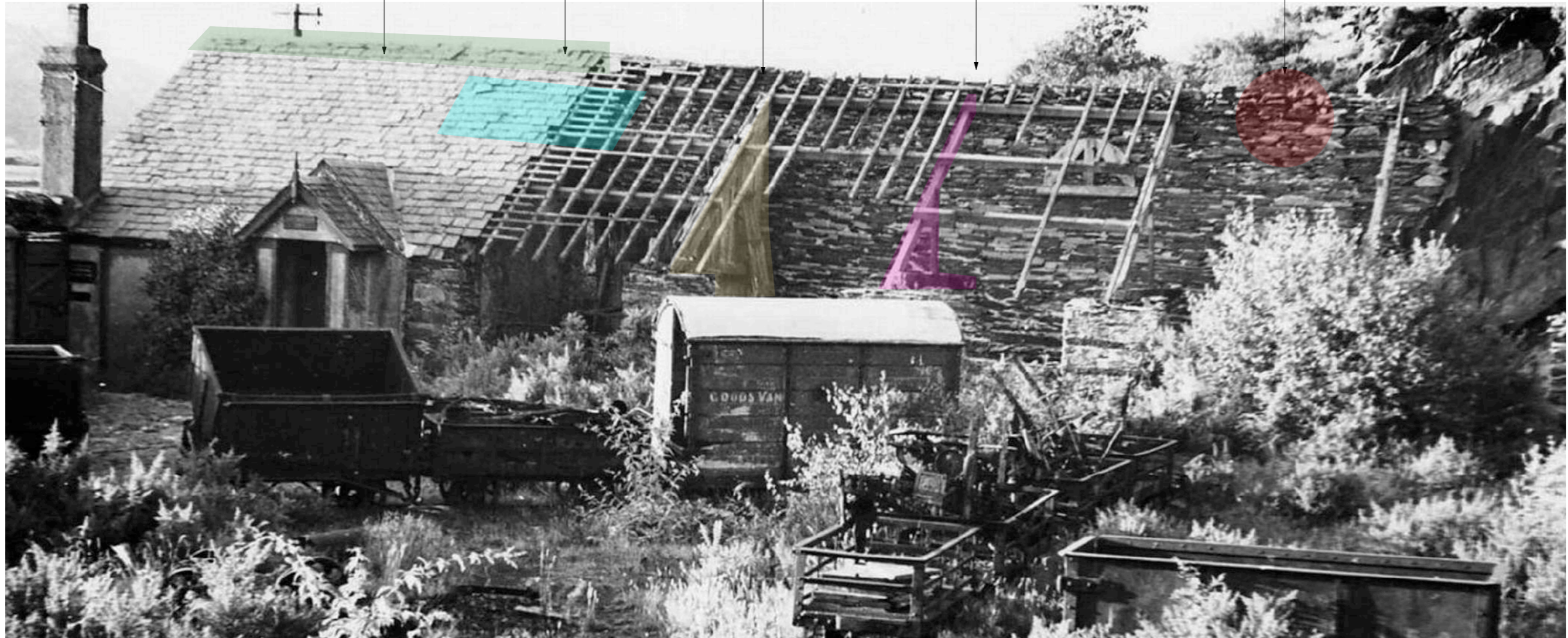
Oversailing verge to the rear with timber fascia;

Welsh Slate roof and batten exposed to the underside

Vertical timber boarding to the internal partitions

Roof structure is supported by tie beams at the centre of the piers and tied back to the wall. This would impinge on head height - so a simpler roof structure is proposed

Rubble slate walling (reclaimed from site)



Thread

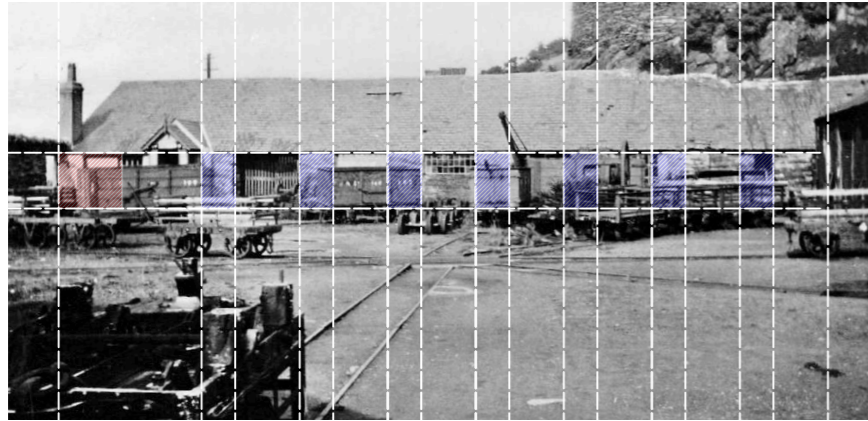
Client: FWHR
Project Architect: Claire Fear

BOSTON LODGE WORKS

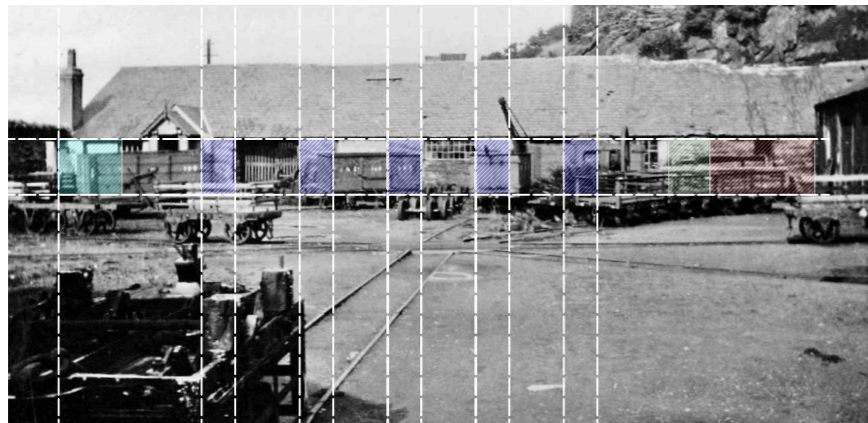
H9
WAGON SHED
AESTHETIC

Scale:
Not to Scale
Date:
OCTOBER 2020

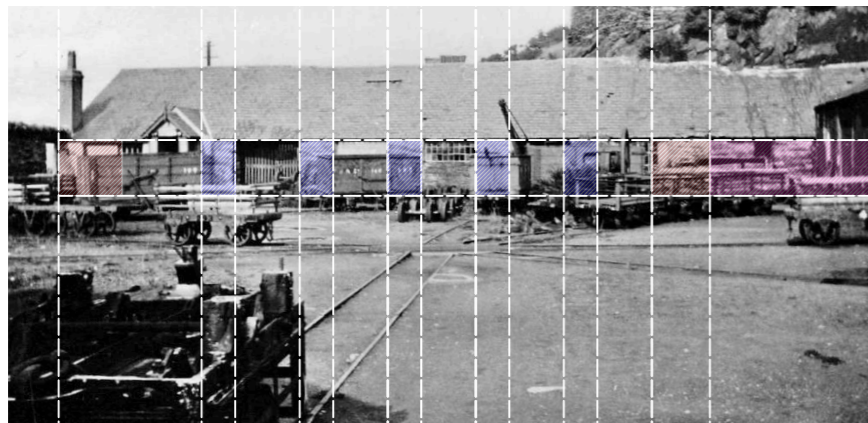
81_H9_01



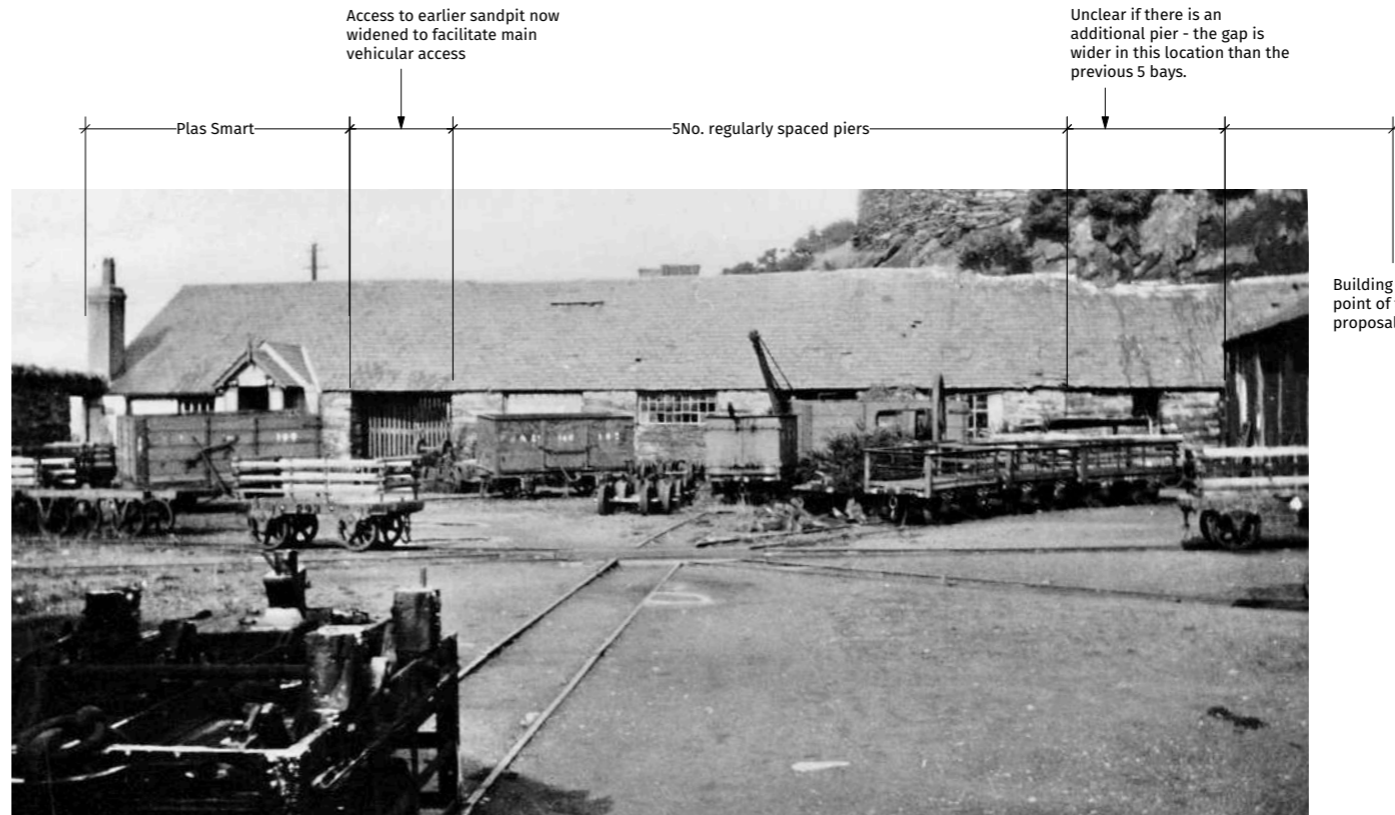
ELEVATION INVESTIGATION NO. 1
 This photo shows that the bays to the right of the sandpit entrance appear to be set out regularly until the last two bays shown as there become more offset when overlaid on the photo.
 (Note: Accepting the distortion of the photo taken on an angle to the building)



ELEVATION INVESTIGATION NO. 2
 Further to the annotation above - this photo is annotated to show each of the different approx. bay sizes (each with a different colour) without imposing the regular bays on the southern part of the structure.
 (Note: Accepting the distortion of the photo taken on an angle to the building)

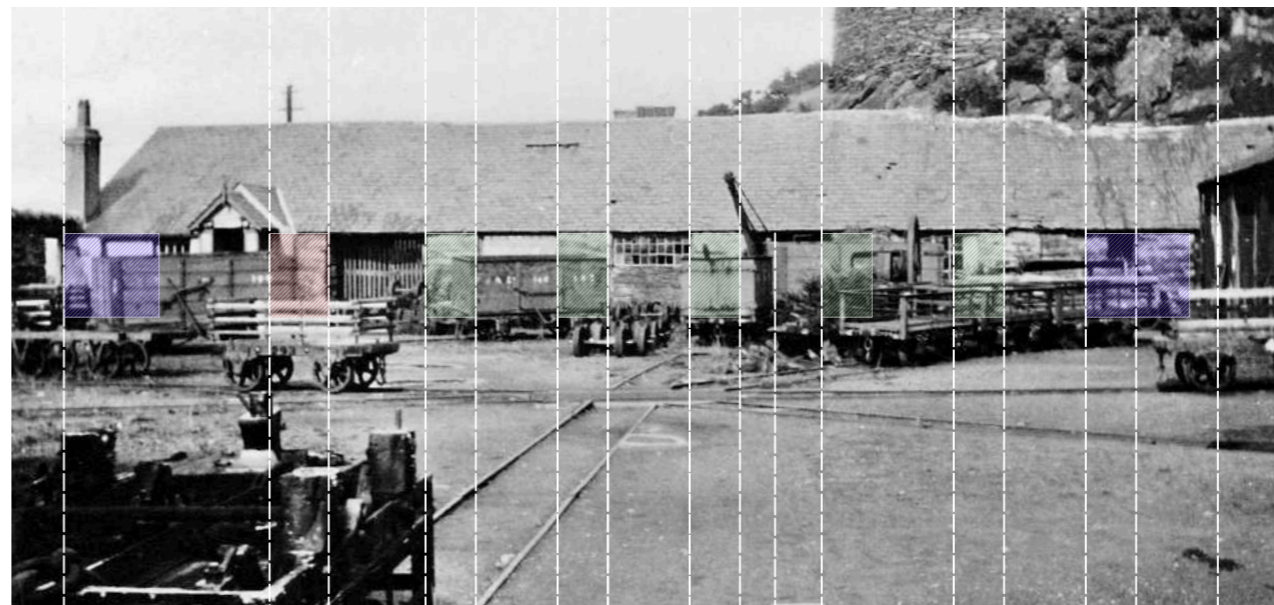


ELEVATION INVESTIGATION NO. 3
 This photo shows a potential symmetry to the northern corner of Plas Smart and the opposite bay to south of H9 (both shown orange). The bay shown pink is queried as having a different elevation setting out as shown in the images above.
 (Note: Accepting the distortion of the photo taken on an angle to the building)



Building extends beyond the point of the new building proposal

Wagon Shed / Store photo - 1950
 Photo of the Wagon Shed used to inform the setting out of the proposed building.



ELEVATION SETTING PROPOSED
 Given the differences shown in the investigations 1 - 3 the above setting out is investigated further on the H9 proposal drawing to co-ordinate with changes due to the access drive width being widened following demolition of the Wagon Shed, length of building. The following is proposed:

- **Blue:** The Proposed building is terminated with a nib of masonry symmetrical to the corner at Plas Smart;
- **Red:** This bay is unique due to the projecting nib and alterations due to render and porch added;
- **Green:** All bays and gaps between bays to be equal for this section of the building;

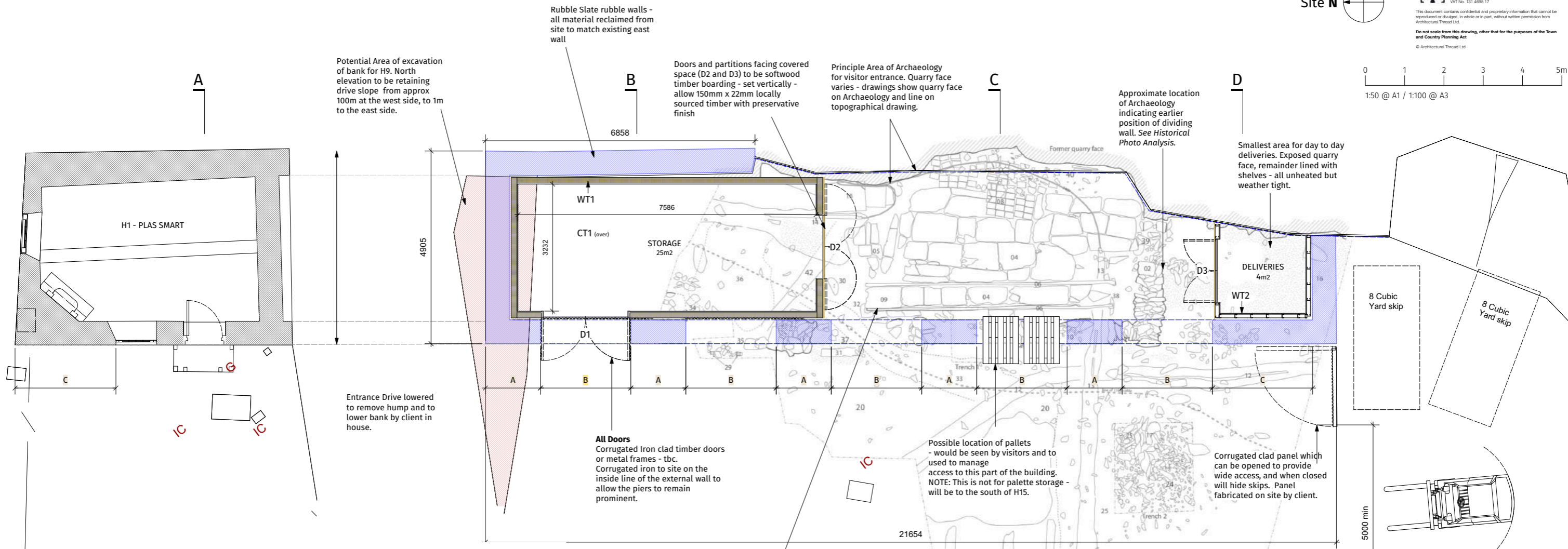
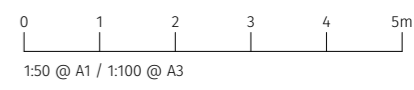
REVISIONS

Thread

Client: FWHR
 Project Architect: Claire Fear
 BOSTON LODGE WORKS

**H9 - WAGON SHED
 HISTORICAL PHOTO
 ANALYSIS**

Scale:
Not to Scale
 Date:
OCTOBER 2020



DRAFT SPECIFICATION FOR RIBA STAGE 2 ONLY

WT1 (Wall Type 1) - 195mm Insulated Metal Stud
 Wall Lining to achieve min. U-Value **0.22W/m2K**

INSIDE

52.5mm Celotex PL4040 insulated plasterboard taped and sealed as VCL in accordance with manufacturers recommendations with; 25mm T&G Plywood cladding to the interior finish with OSMO finish over. All set on 150mm slate plinth with DPC over.

EXTERNAL WALL

90mm Celotex GA4000 rigid board insulation packed between studs

92mm 'C' Section Metal Studwork at 600mm centres

50mm cavity

Solid masonry wall / Quarry face

External finish when not behind the masonry to be as shown on drawings.

WT2 (Wall Type 2) - 92mm Metal Stud Wall with plywood Lining

CT1 (Ceiling Type 1) - 180mm Insulated
 Timber Joisted Ceiling to achieve min. U-Value **0.18W/m2K**

New 150mm solid softwood timber joists to **SEngs specification**

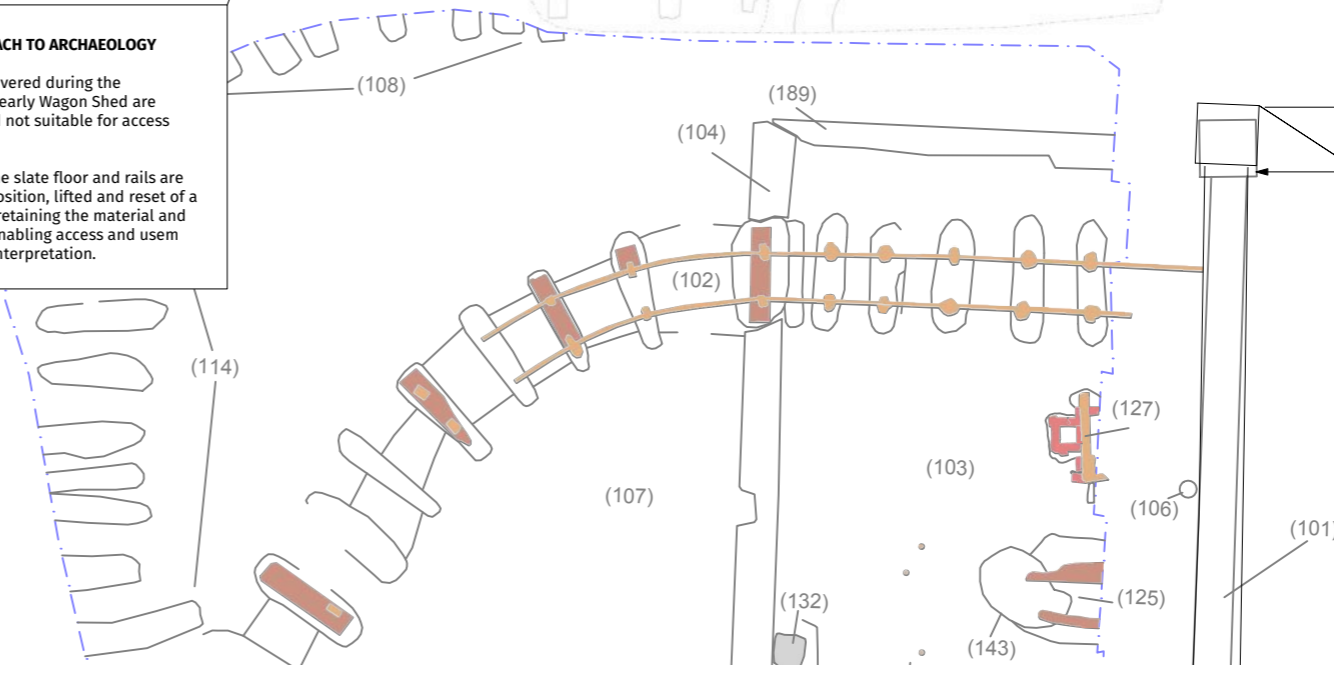
140mm Celotex XR4000 rigid board insulation between joists

27.5mm Celotex PL4015 insulated plasterboard taped and sealed as VCL in accordance with manufacturers recommendations with; 25mm Plywood to form the ceiling.

PROPOSED APPROACH TO ARCHAEOLOGY

The materials uncovered during the excavations of the early Wagon Shed are fragile, uneven and not suitable for access over them.

We propose that the slate floor and rails are fully recorded in position, lifted and reset of a limecrete slab. So retaining the material and arrangement but enabling access and use and facilitating interpretation.

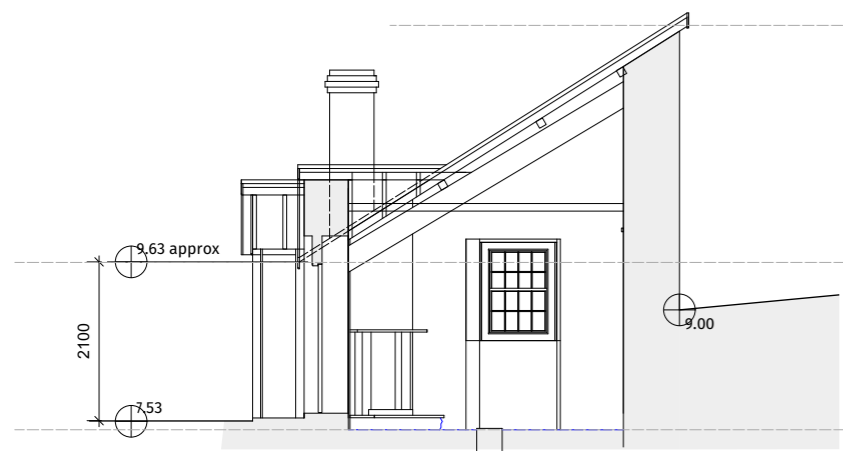


Allow to rebuild existing rubble slate wall to height and length shown on the plan. There is some area of existing wall - but integrity and stability to be checked so this allows for worse case scenario.

Welsh Slate on 25x38 batten over max 225 x 50mm common rafters @ 600 spacing. Client fabricated flat metal strapping to cross-brace roof.

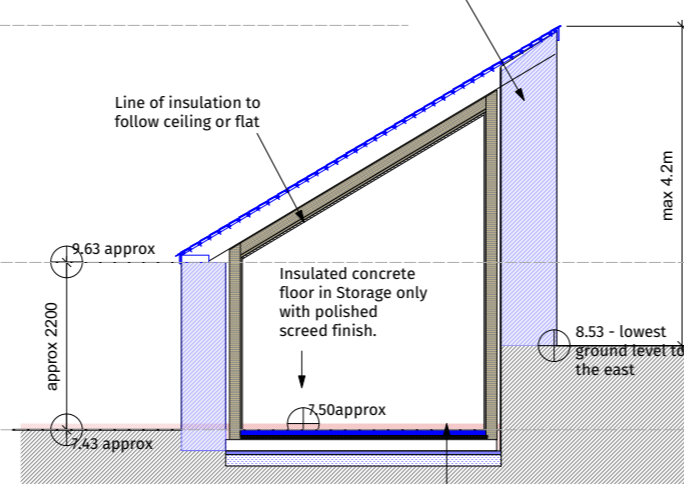
Note allow possible 2no. stainless steel tie rods one on each side of each opening (10no. in total) anchoring wall plate into pier.

Allow to anchor wall plate with s.s. angle to quarry face, and rafter the wall plate.



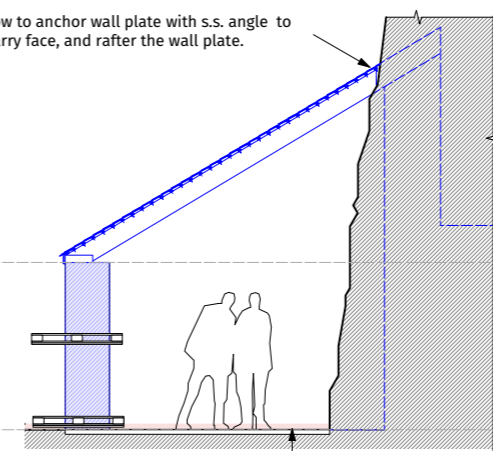
SECTION A

Existing
H1 PLAS SMART

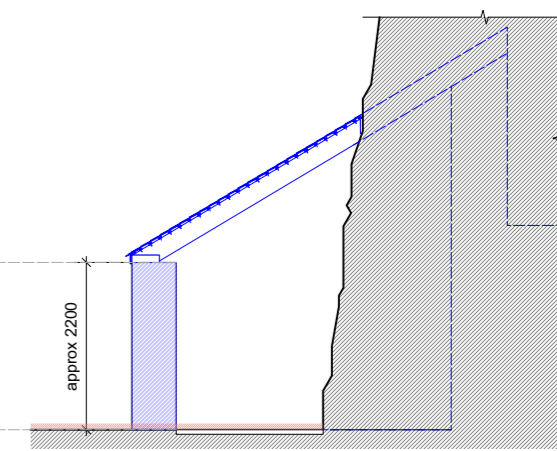


SECTION B

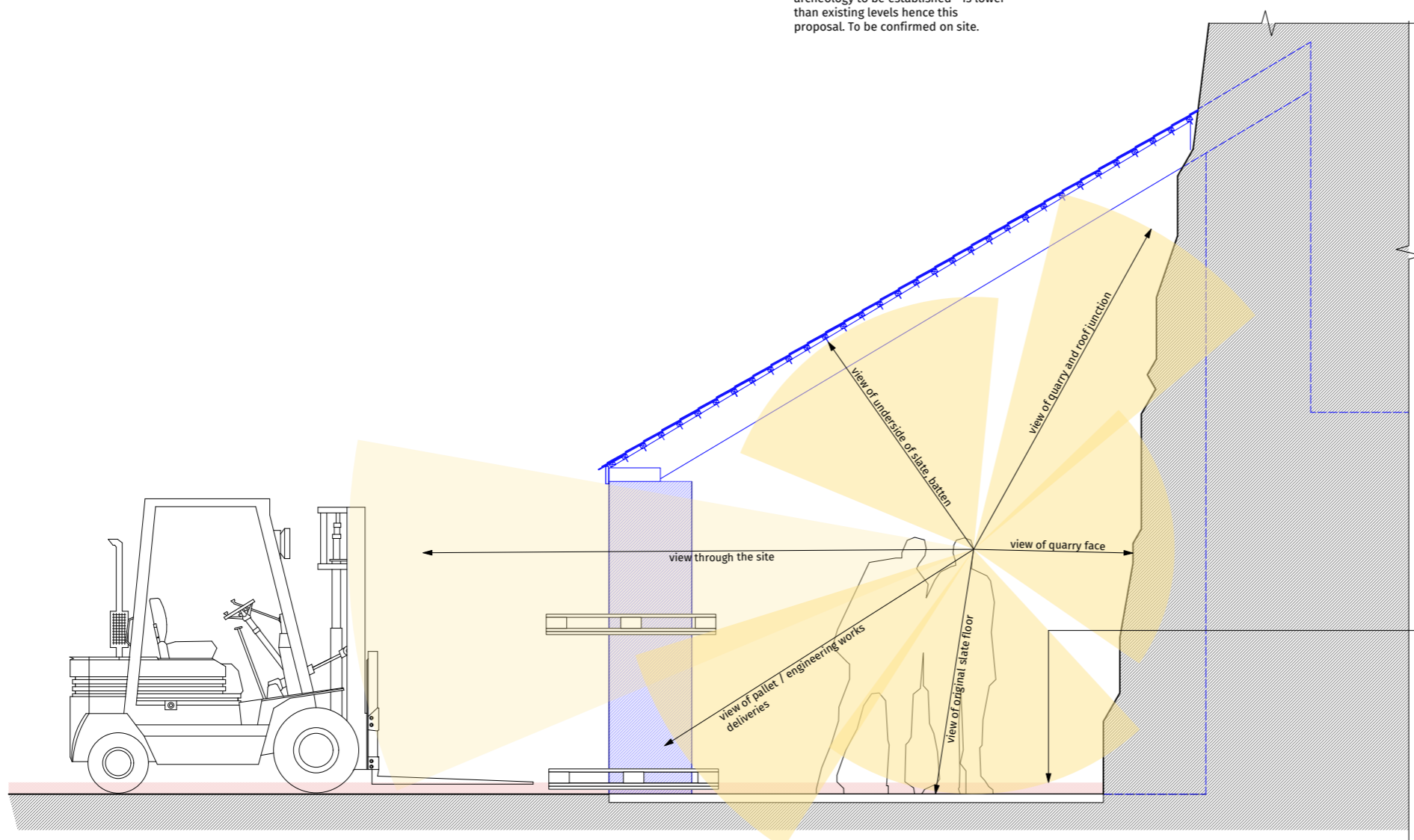
Reduction in levels of building existing ground by 70-150mm to align with levels to the west of the yard and to enable 2.2m head height as eaves level is set by H1. NOTE - Level of archeology to be established - is lower than existing levels hence this proposal. To be confirmed on site.



SECTION C



SECTION D



Visitor Experience

Central Bays open for visitor welcome but also robust enough for slate wagons and other items to be bought into the area.

Extent of retention of archeology to be confirmed.

Scale 1:20 @ A1

REVISIONS

Thread

Client: FWHR
 Project Architect: Claire Fear

BOSTON LODGE WORKS

**H9 - WAGON SHED
 PROPOSED SECTION**

Existing Archaeology

Allow for the careful scraping back of the existing oversite over the archaeology.

The decision to retain or record and remove or reuse material is to be discussed with CADW and the Conservation Officer.

Scale:
 1:50 @ A1 / 1:100 @ A3 unless stated
 Date:
 OCTOBER 2020

Scale 1:20 @ A1 / 1:40 @ A3

81_H9_04

Thread

H10

Boston Lodge 1 & 2 / The Barracks

H10 Boston Lodge Cottages 1 & 2 (Georgian Barracks)

This building is a prominent structure forming one of the primary historic views of the site from the Cob and the Railway as it passes through Boston Lodge Works.

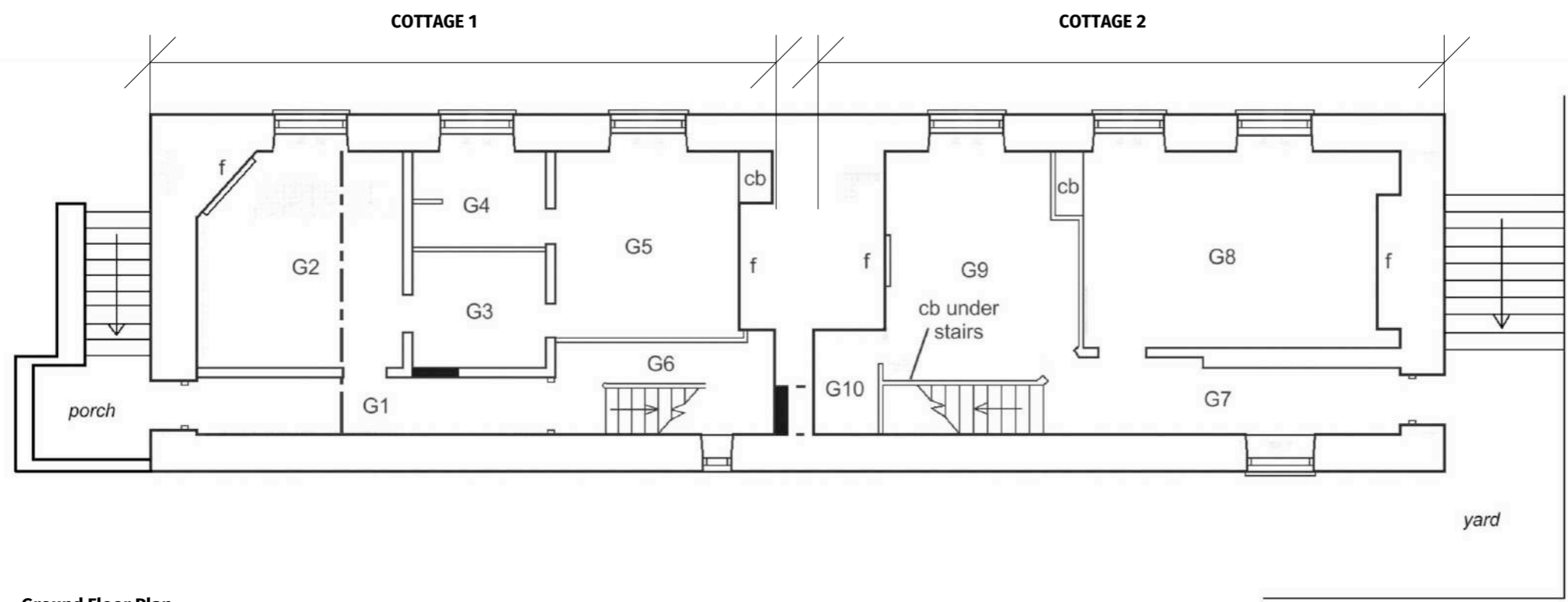
External works visible in this view are proposed as conservation repairs only. The challenge presented by the approximately 1.5 metre difference from the front ground level to internal ground floor level of the proposed new office, has been addressed by forming a gently sloped landscaped access to the rear of the building, between H10 and OPS12. This will not have a visual impact on the main protected view, and makes use of a currently underused in-between space.

The proposed layout keeps accommodation and office use separated by the existing masonry party wall. The proposal however allows for the potential future expansion of the first floor office into Cottage 1 for greater flexibility over time.

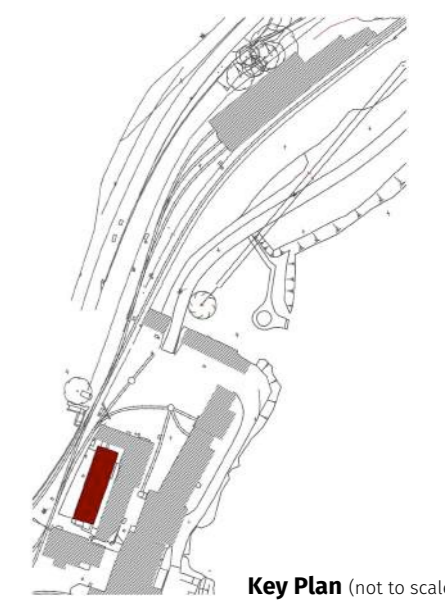
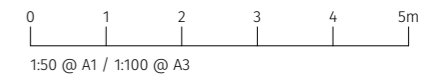
Refer to drawings 81_H10_01-02.



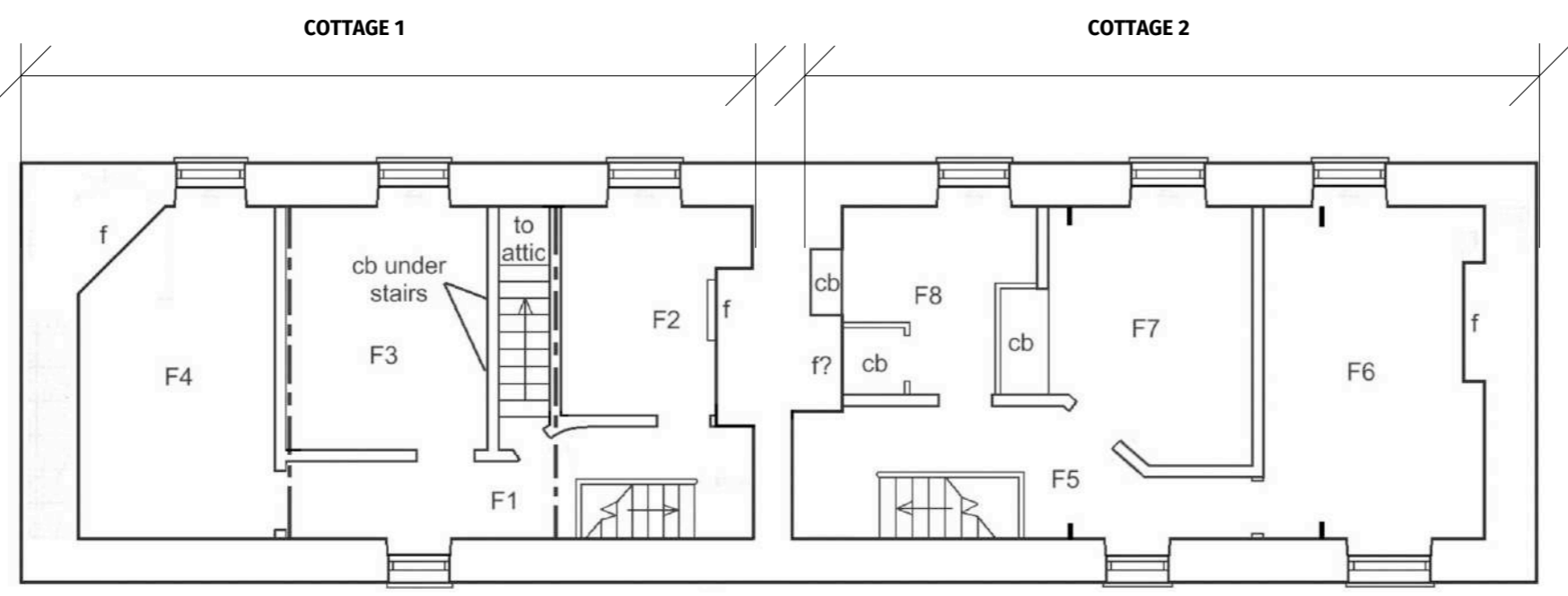
Bottom image: Historic photograph taken from the Cob towards Boston Lodge, showing the Toll House below and the prominent Boston Lodge Cottages 1&2 along the edge of the Railway.



Ground Floor Plan
Scale 1:50 @ A1 / 1:100 @ A3



Note:
Scaled drawings of existing taken from
Historic Building Assessment
(Bancroft Heritage/Zeeprat, 2014)



First Floor Plan
Scale 1:50 @ A1 / 1:100 @ A3

REVISIONS _____

Thread

Client: FWHR
Project Architect: Claire Fear
BOSTON LODGE WORKS

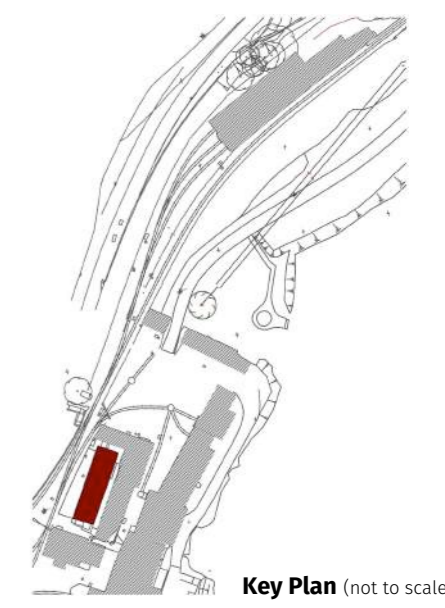
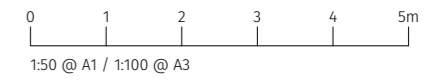
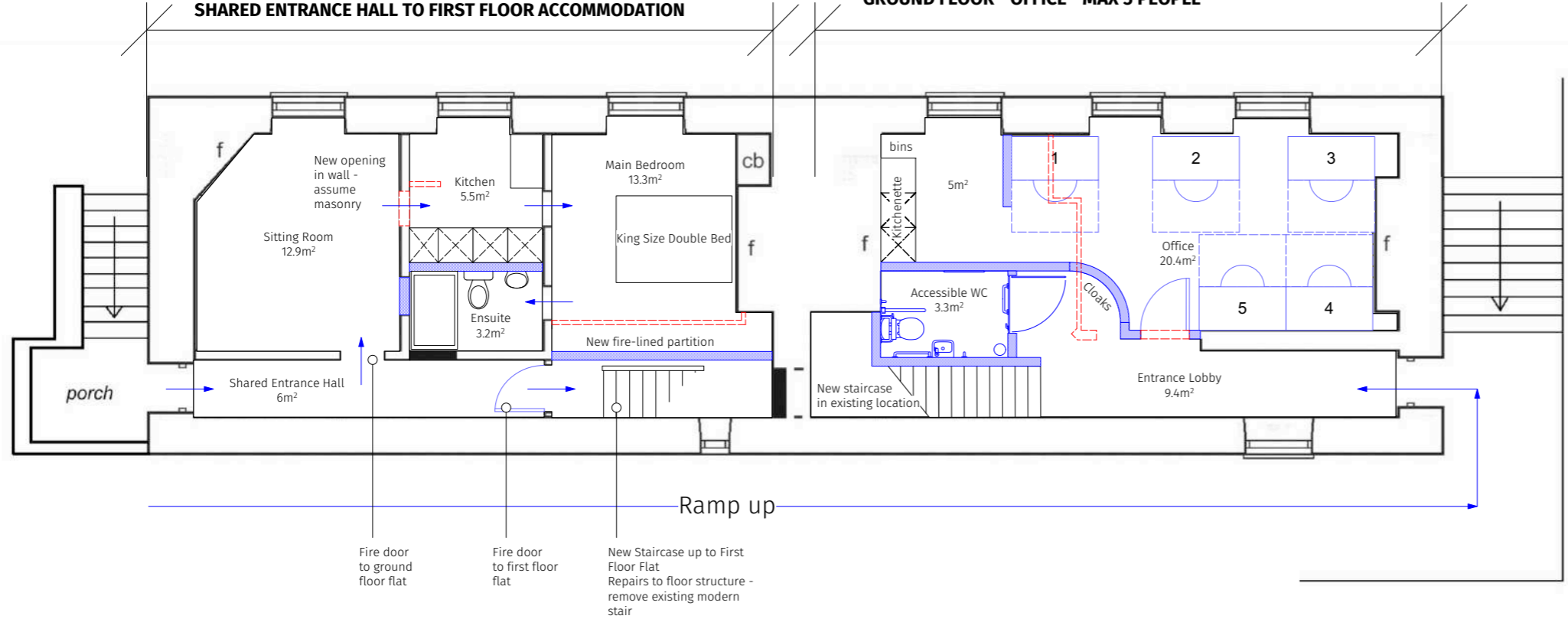
**H10 COTTAGE 1 & 2
EXISTING FLOOR PLANS**

Scale:
1:50@A1 / 1:100@A3
Date:
OCTOBER 2020

81_H10_01

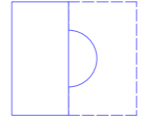
COTTAGE 1
GROUND FLOOR - UNIT OF ACCOMMODATION - 2 PEOPLE MAX
SHARED ENTRANCE HALL TO FIRST FLOOR ACCOMMODATION

COTTAGE 2
GROUND FLOOR - OFFICE - MAX 5 PEOPLE



Ground Floor Plan
 Scale 1:50 @ A1 / 1:100 @ A3

KEY:



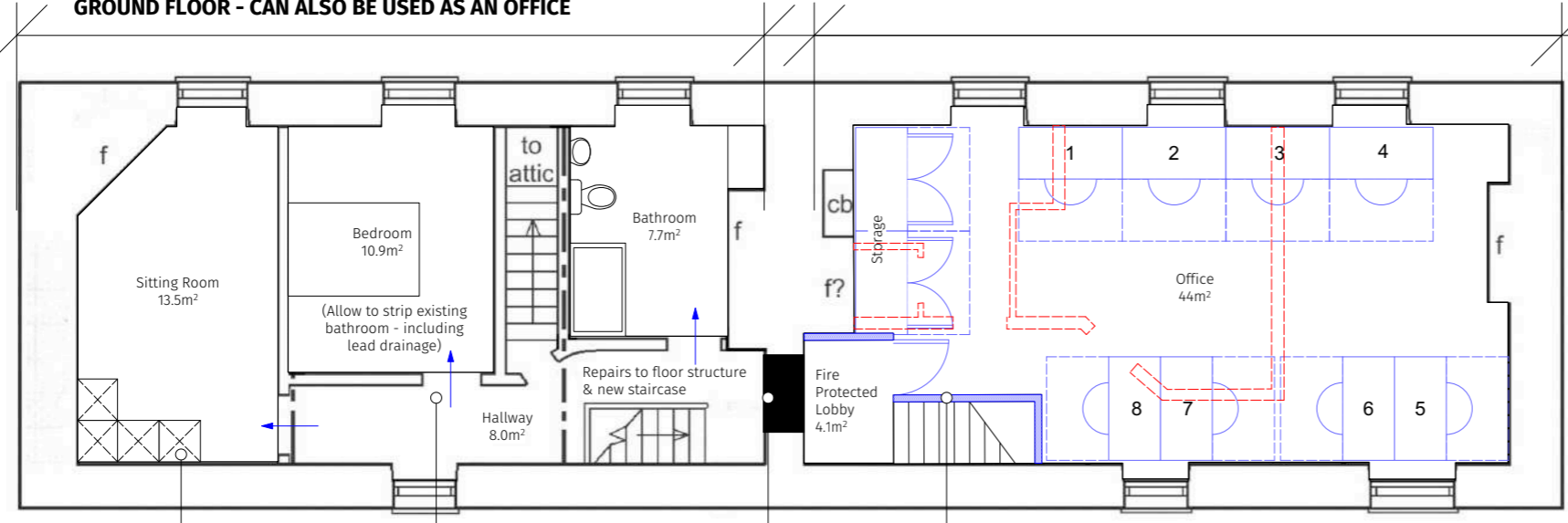
Desk Size shown 1500 x 750mm
 Dashed line shows space for ease of chair movement and desk access

Note:
 Scaled drawings of existing taken from Historic Building Assessment (Bancroft Heritage/Zeevat, 2014)

REVISIONS

COTTAGE 1
FIRST FLOOR - UNIT OF ACCOMMODATION - ACCESSED FROM
GROUND FLOOR - CAN ALSO BE USED AS AN OFFICE

COTTAGE 2
FIRST FLOOR - OFFICE - MAX 8 PEOPLE



First Floor Plan
 Scale 1:50 @ A1 / 1:100 @ A3



Client: FWHR
 Project Architect: Claire Fear
 BOSTON LODGE WORKS

H10 COTTAGE 1 & 2
PROPOSED
FLOOR PLANS

Scale:
 1:50@A1 / 1:100@A3
 Date:
OCTOBER 2020

Thread

H14

The Stores



H14 The Stores (The Den, Old Carpenters Shop)

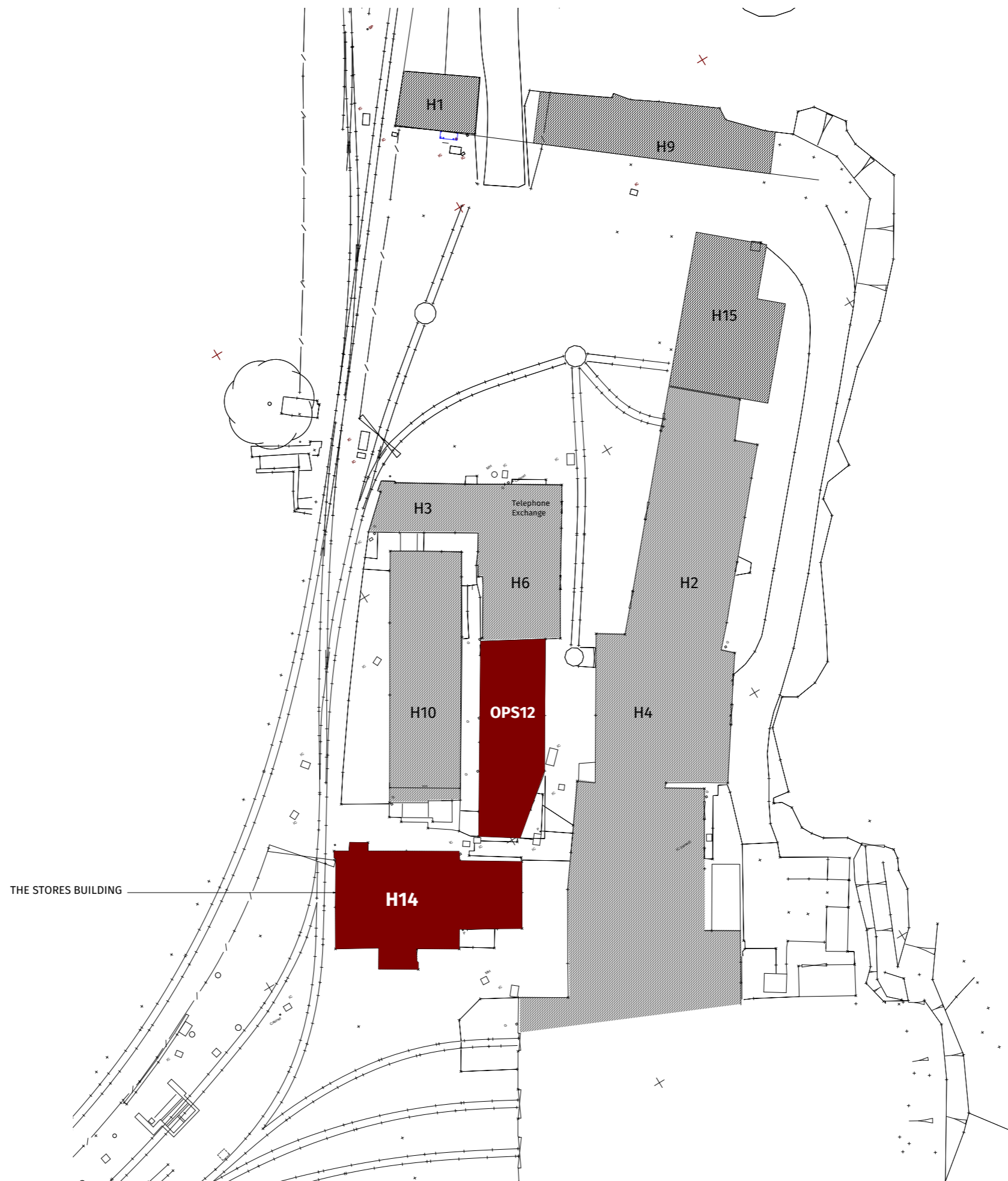
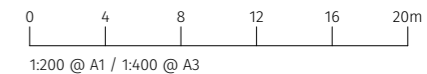
As H14 (The Stores) once accommodated the Den, it is one of the significant structures as part of the site's working history. This building is the proposed new location for the Den, including the Wash Up Lobby, WCs and Showers and Locker area. The location improves connections to the works facilities, views on the site and practical flow through the space, based on the practical needs of the FfWHR's staff and volunteers.

The entrance to the oil store through the wide existing door provides access to a lobby space with a large trough sink for all to use, to enable some cleaning off of oil and grime before accessing the Den or WCs. This prevents unnecessary dirt being tracked into the Den space where food is eaten. The design also allows for wider WCs than standard to enable easier removal of overalls, each of these individually accessed off a corridor so that the split between the number of male and female WCs can be flexible over time. Each can be allocated by signs on the door so these are not unisex - but can be changed when required. The proposed new lobby and wash up area will serve the role of the later porch addition, which is to be demolished to reinstate the west elevation to its appearance as shown by historic photographs (*refer to drawings*).

The design intention is to reinstate the lost first floor and gable of the old Saw Mill, as part of the extension of the Oil Store. This contributes to the recreation of lost historic views and allows for the provision of the larger WCs and shower facilities and proposed new Electricians Workshop and Store.

Refer to drawings 81_H14_01-06.





REVISIONS _____



Client: FWHR
Project Architect: Claire Fear

BOSTON LODGE WORKS

H14 - THE STORES
Site & Location Plan

Scale:
1:200 @ A1 / 1:400 @ A3

Date:
October 2020

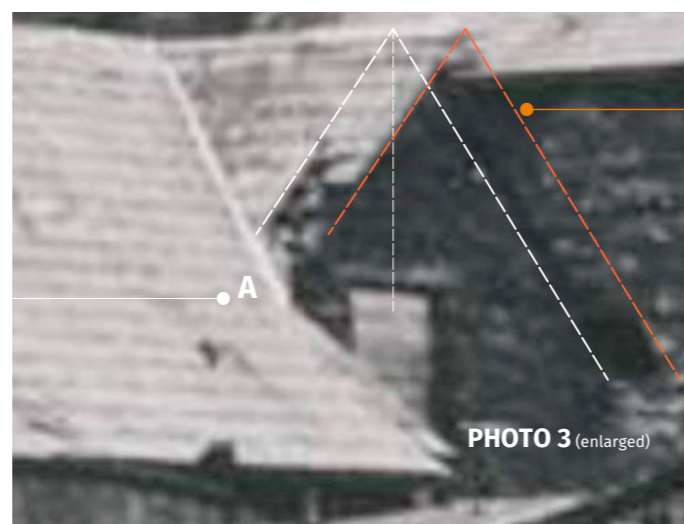
81_H14_00

Valley board to west of southern gable

B Southern gable of Saw Mills



Saw Mills 'overlapping' to the south of the Barracks



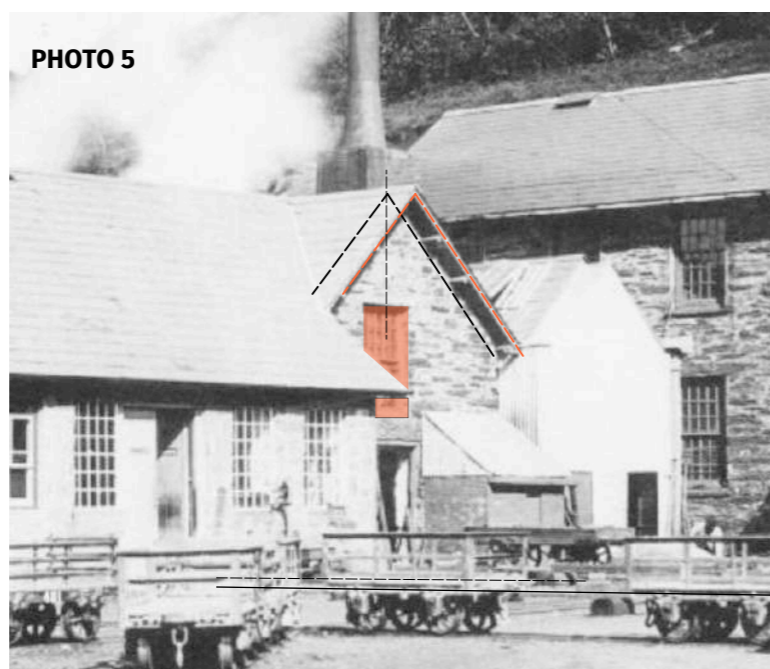
PHOTOS 3 AND 4 show:
 The roof overhang has been lost on the south side of the gable, but not the north - making it appear as though the first floor opening is offset from the ridge.

The orange line is the line of the projecting gable set out from the visible structure remaining to the south, and the line of roof overhang that remains to the north side of the gable.

The white line shows the wall/roof abutment to the south, and where it would be following the pitch.

PHOTO 5 - This same arrangement can also be seen in Photo 5 below.

Therefore, these also illustrate that the window is central to the gable.



This photo shows the west gable prior to demolition and removal of the roof and gable.

Key Points for the development of the reinstated gable and associated Roof Proposals

- A - The first floor loft opening is centered on the ridge position of the gable.
- B - The south side of the roof had a further gable - as also seen in photo 2 (above);
- C - The building projected behind the Barracks (see Photo 2); &
- D - The ridge of the Stores and the Saw Mill were level (all photos).

Thread

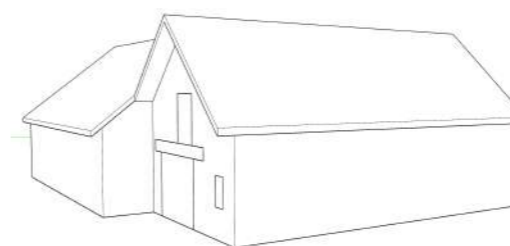
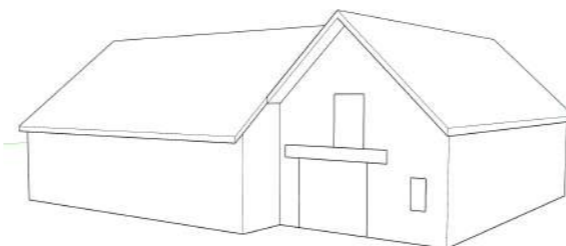
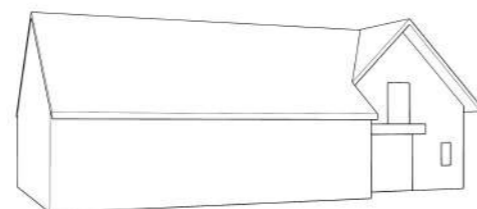
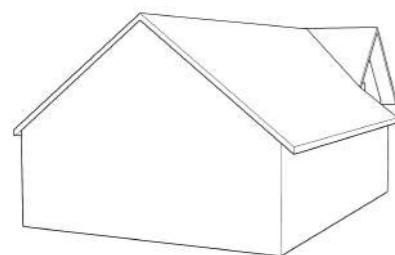
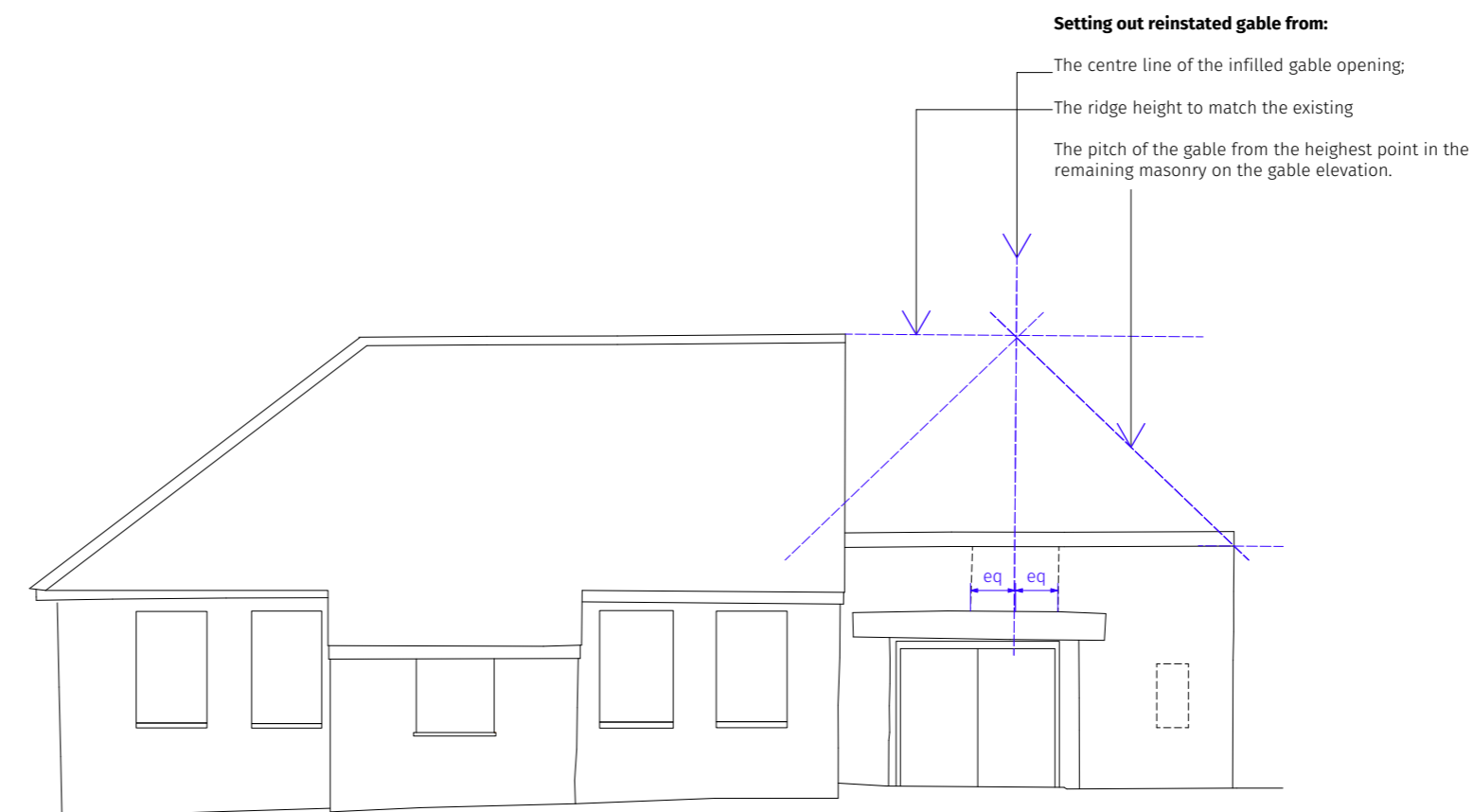
Client: FWHR
 Project Architect: Claire Fear

BOSTON LODGE WORKS

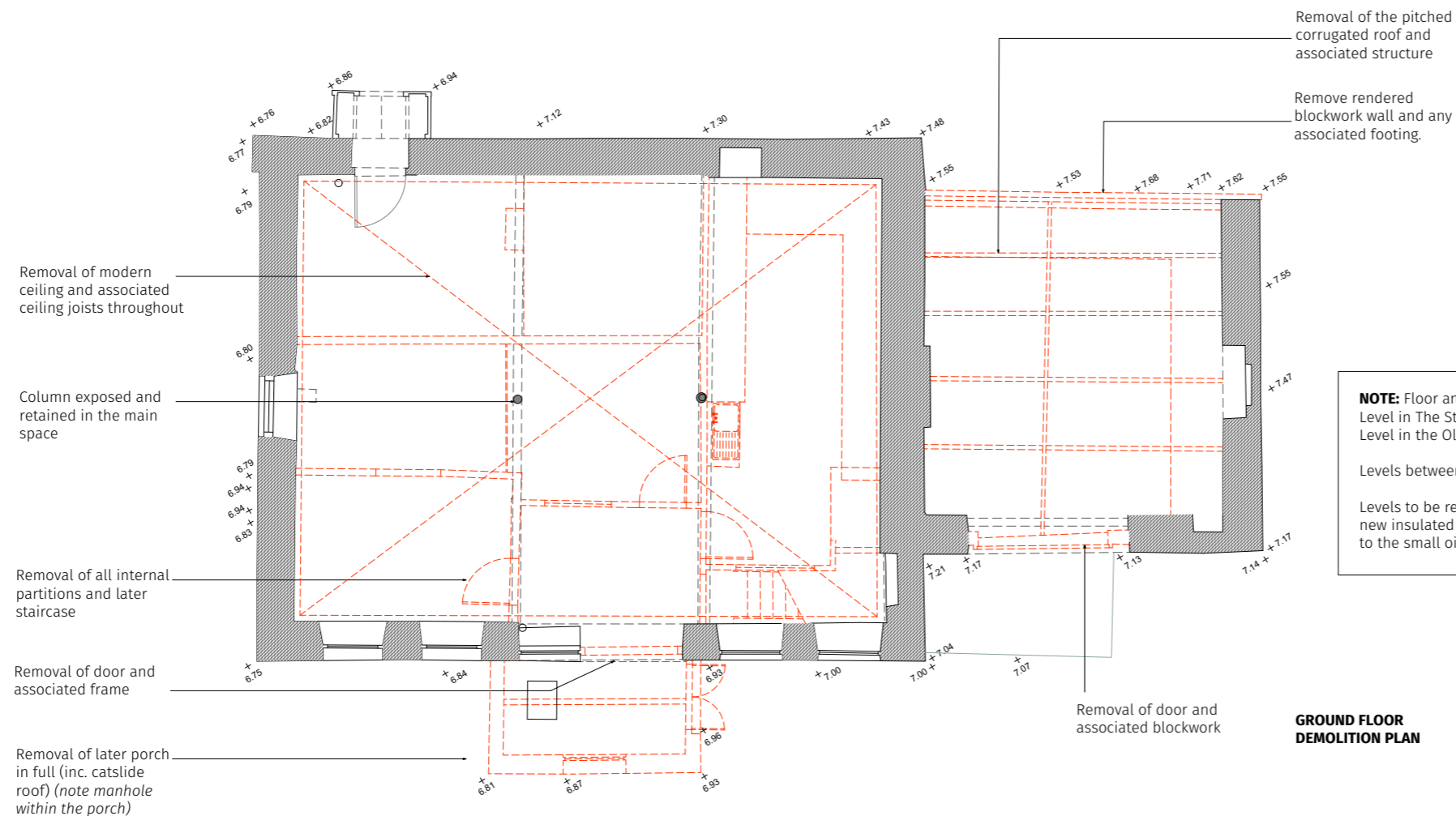
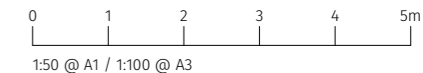
H14 - THE STORES
 Historic Photo Assessment

Scale:
Not to scale
 Date:
October 2020

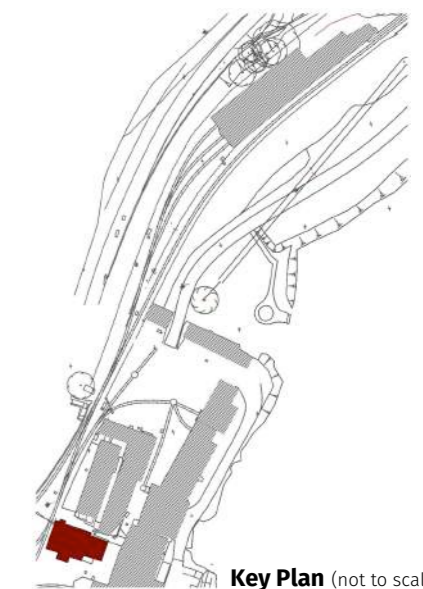
81_H14_01



General Views of Proposed Roof form reinstatement guided by the principles set out above, on the previous page, and in the analysis of the historic photos



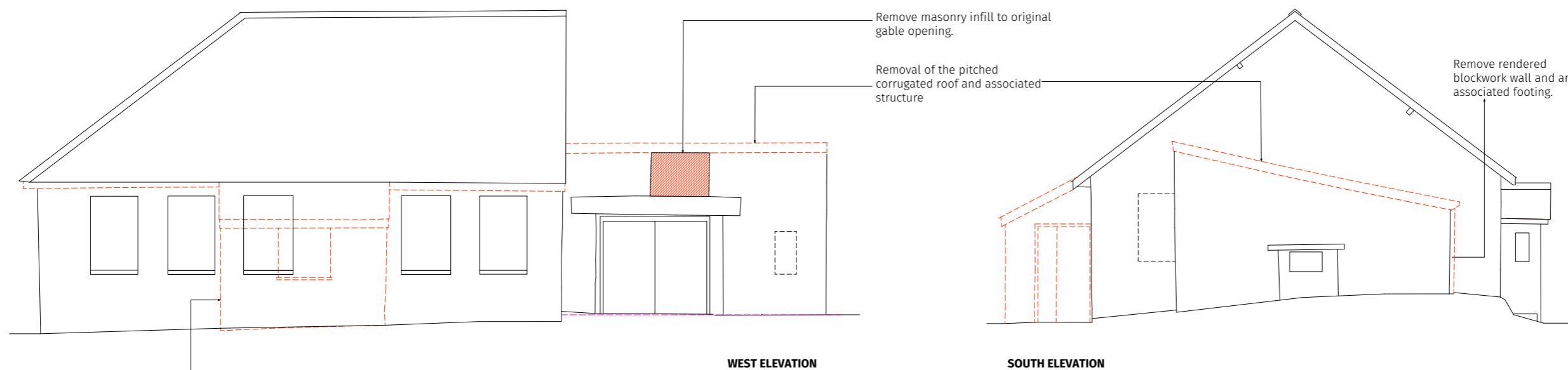
NOTE: Floor and Levels
 Level in The Stores is 7.02
 Level in the Old Oil Store is 7.21
 Levels between the two must be equal.
 Levels to be reviewed and budget to allow for new insulated floors and potential underpinning to the small oil store.



Key Plan (not to scale)

GROUND FLOOR DEMOLITION PLAN

REVISIONS



Removal of later porch in full (inc. catslide roof and gutters to north and south) (note manhole within the porch)

WEST ELEVATION

SOUTH ELEVATION



Client: FWHR
 Project Architect: Claire Fear

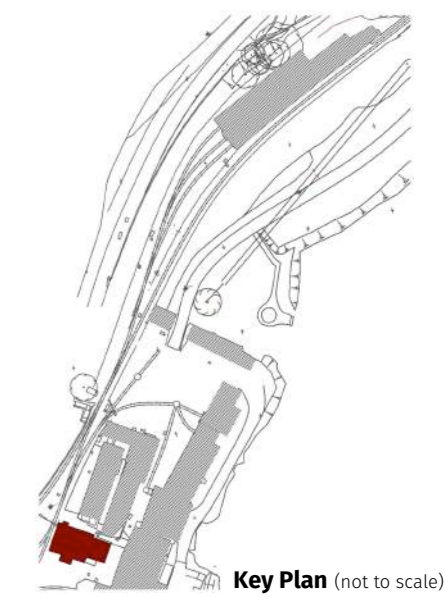
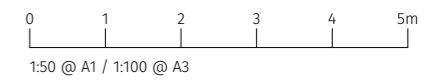
BOSTON LODGE WORKS

**H14
 THE STORES - DEMOLITION
 PLAN & ELEVATIONS**

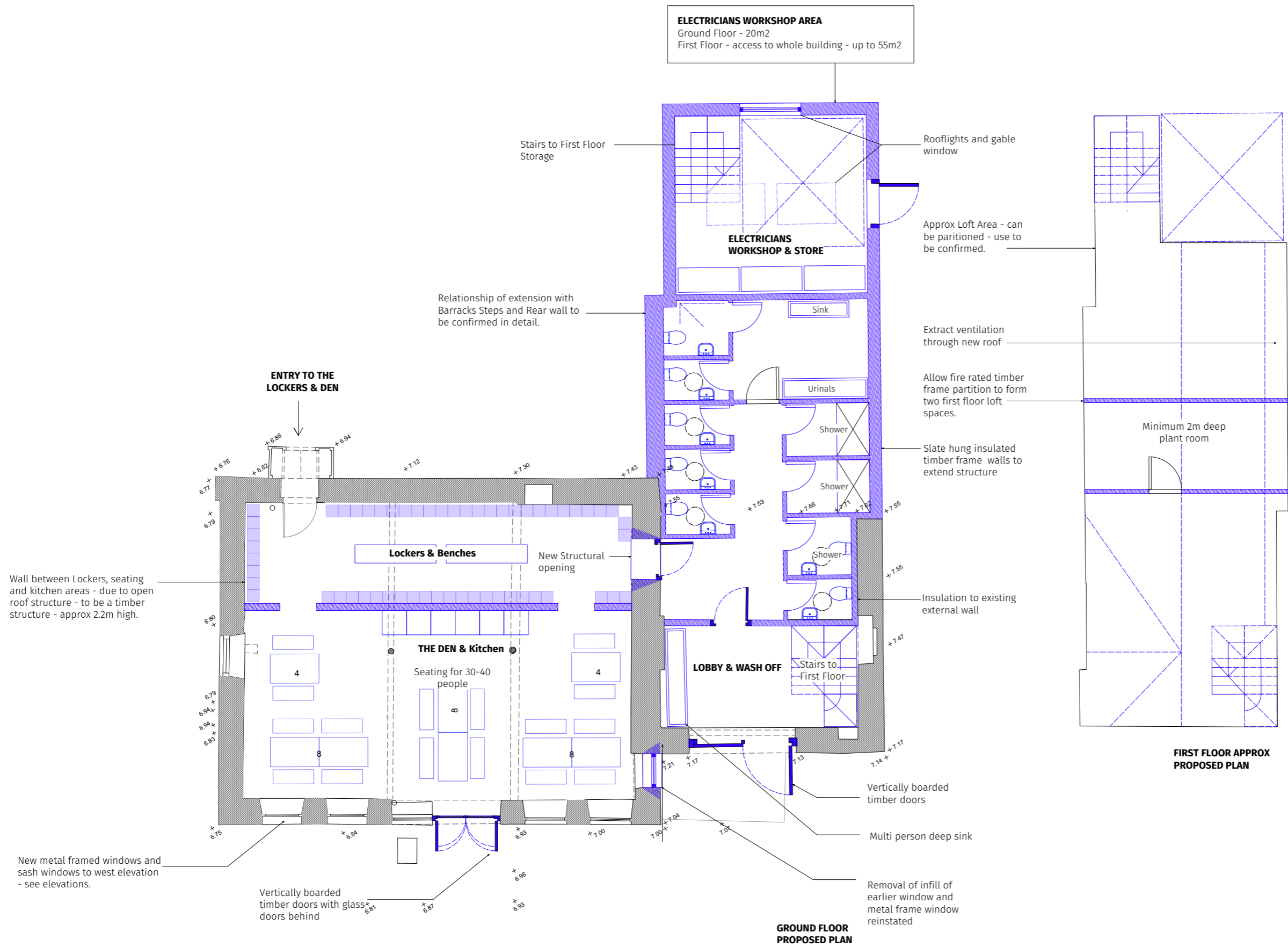
Scale:
 1:50 @ A1 / 1:100 @ A3

Date:
 October 2020

81_H14_03 A



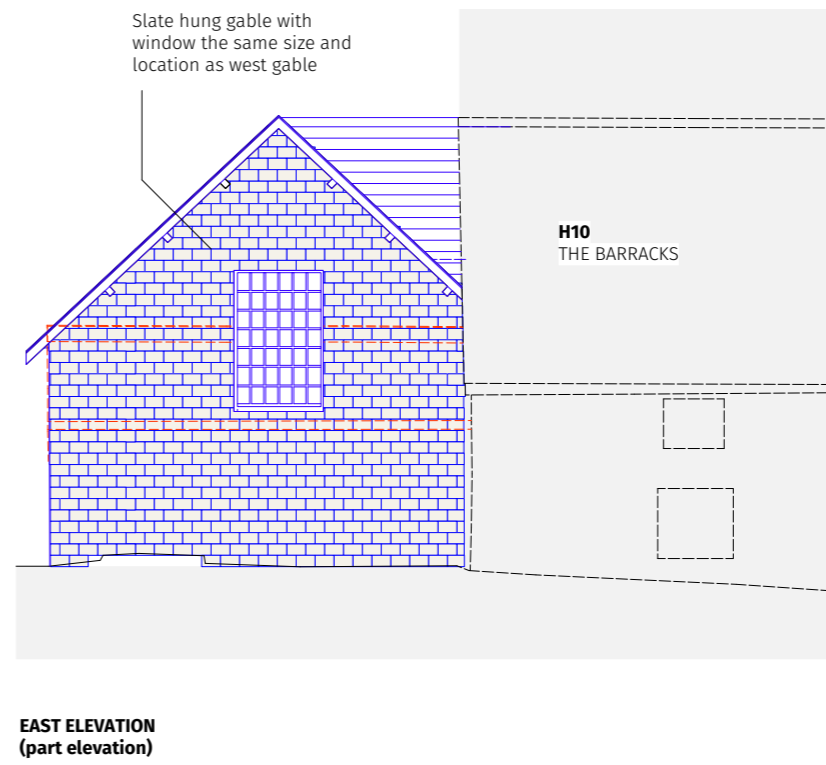
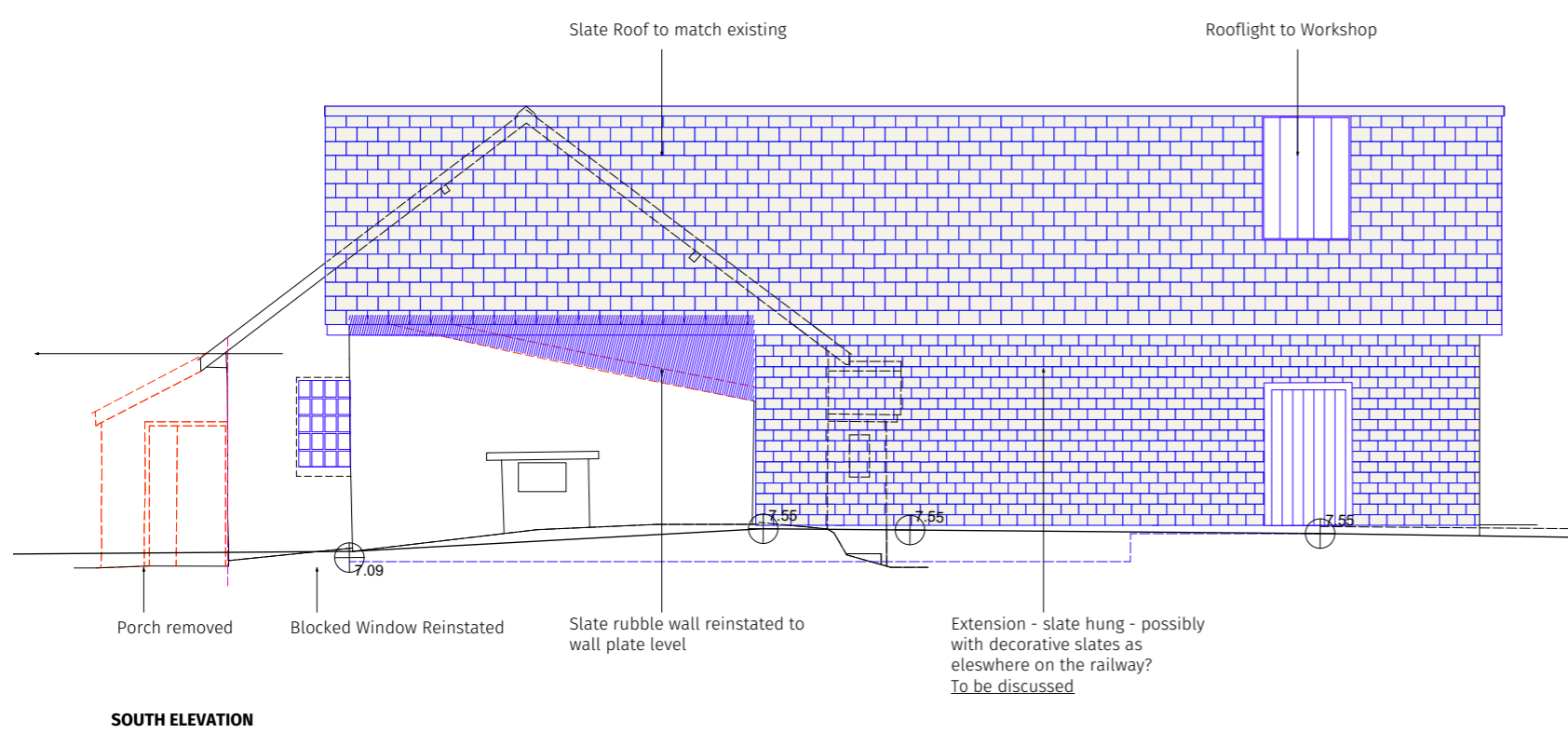
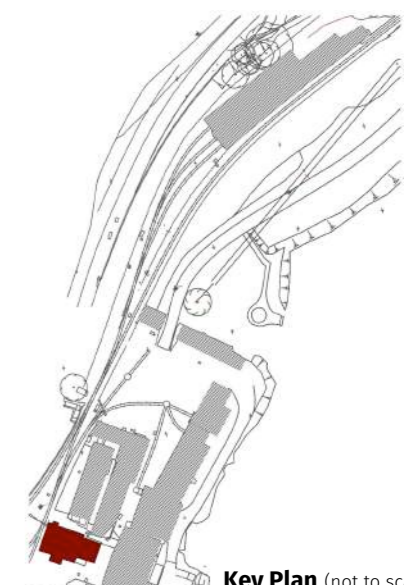
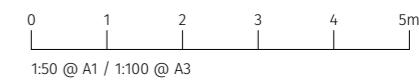
ELECTRICIANS WORKSHOP AREA
 Ground Floor - 20m²
 First Floor - access to whole building - up to 55m²



Client: FWHR
 Project Architect: Claire Fear
 BOSTON LODGE WORKS

**H14
 THE STORES
 PROPOSED PLAN**

Scale:
 1:50 @ A1 / 1:100 @ A3
 Date:
 October 2020



REVISIONS

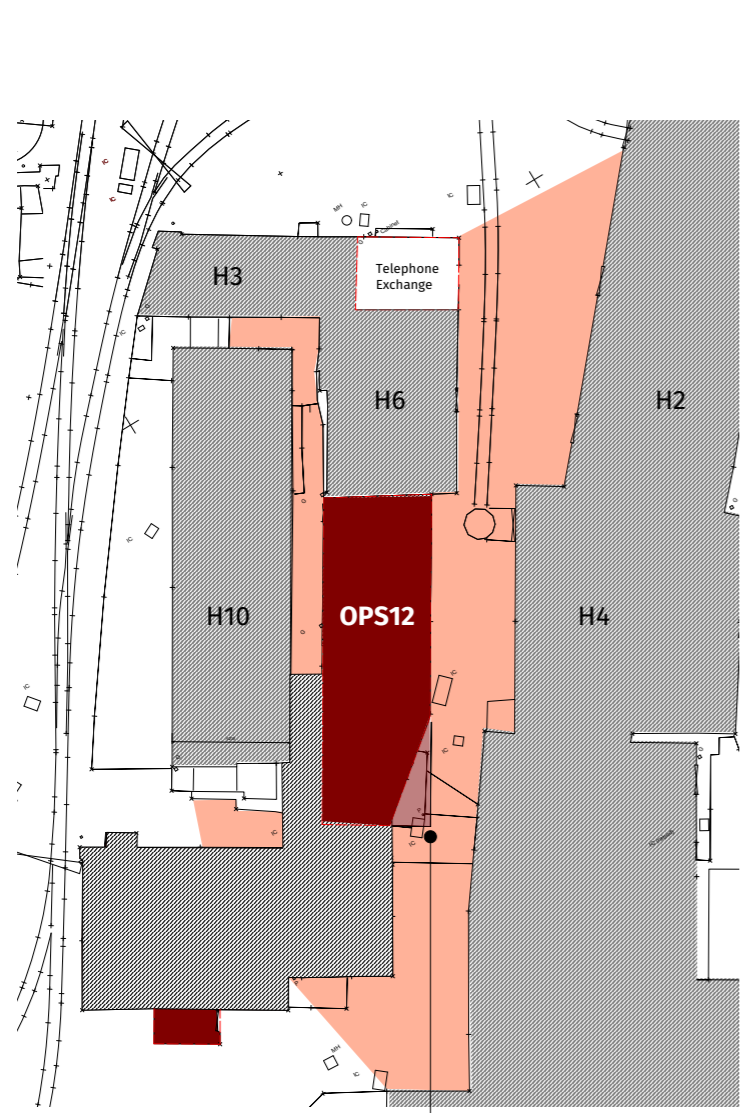
Thread

Client: FWHR
 Project Architect: Claire Fear
 BOSTON LODGE WORKS

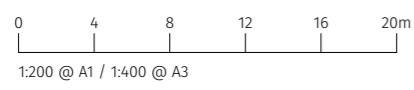
**H14
 THE STORES PROPOSED
 ELEVATIONS**

Scale:
 1:50 @ A1 / 1:100 @ A3
 Date:
 October 2020

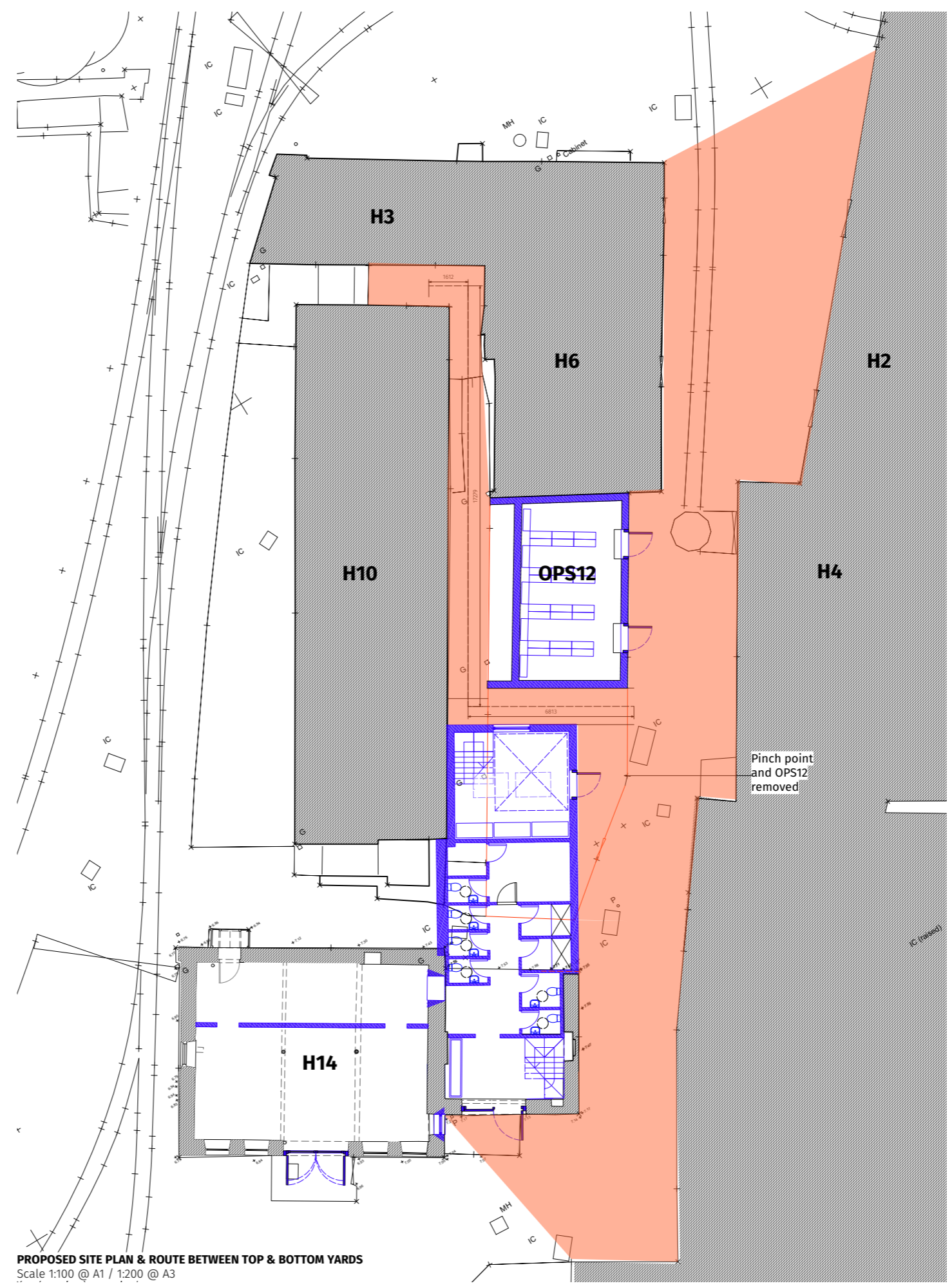
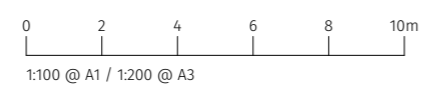
81_H14_05



EXISTING SITE PLAN & ROUTE BETWEEN TOP & BOTTOM YARDS
 Scale 1:200 @ A1 / 1:400 @ A3



Pinch Point in route between top and bottom yard



PROPOSED SITE PLAN & ROUTE BETWEEN TOP & BOTTOM YARDS
 Scale 1:100 @ A1 / 1:200 @ A3

REVISIONS



Client: FWHR
 Project Architect: Claire Fear
BOSTON LODGE WORKS

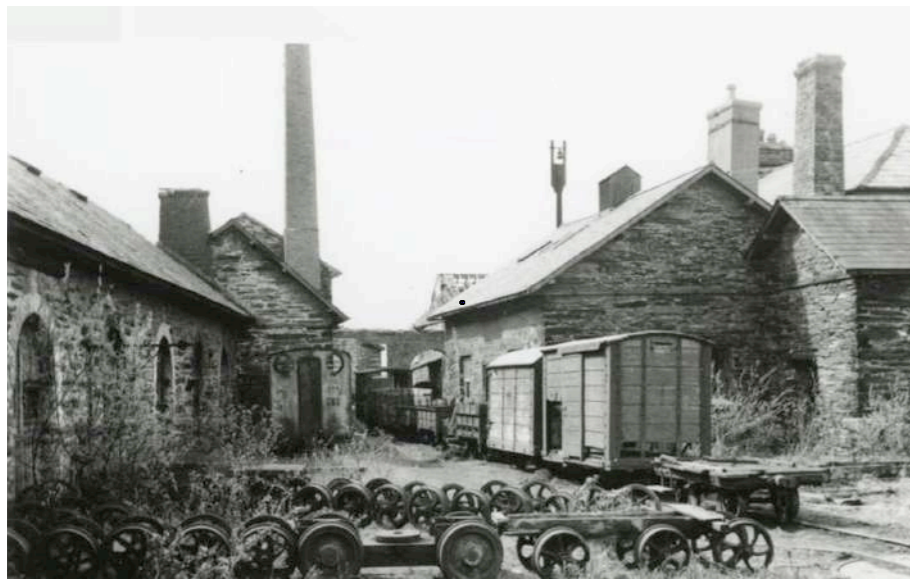
H14 & OPS12 Comparative Site Plans

Scale:
See Plans
 Date:
October 2020

Thread

OPS12

New Store



Historic photograph shows the Brass Foundry as dominant to any adjacent building



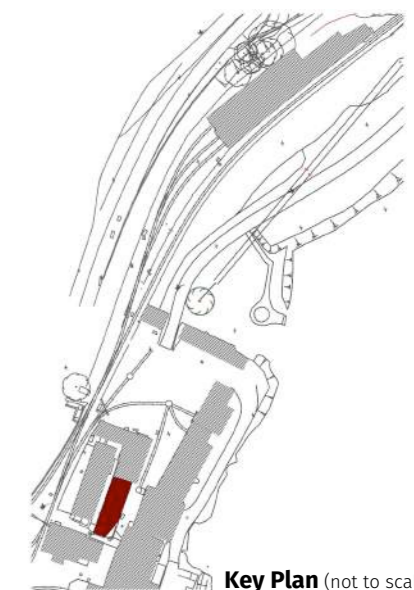
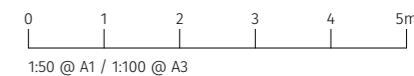
OPS12 New Store (Mess building replaced by H14)

Lost Structure (Saw Mill) - The current Den or amenity block, a modern 1970s construction, occupies the site of what was once the Saw Mill. The view from the Top Yard down through the gap between these buildings has lost a pitched roof in this area. This pitched roof relates to the previous gabled form of the Oil Store, south of H14, and its reinstatement will complement the wider composition of buildings (refer to H14 above).

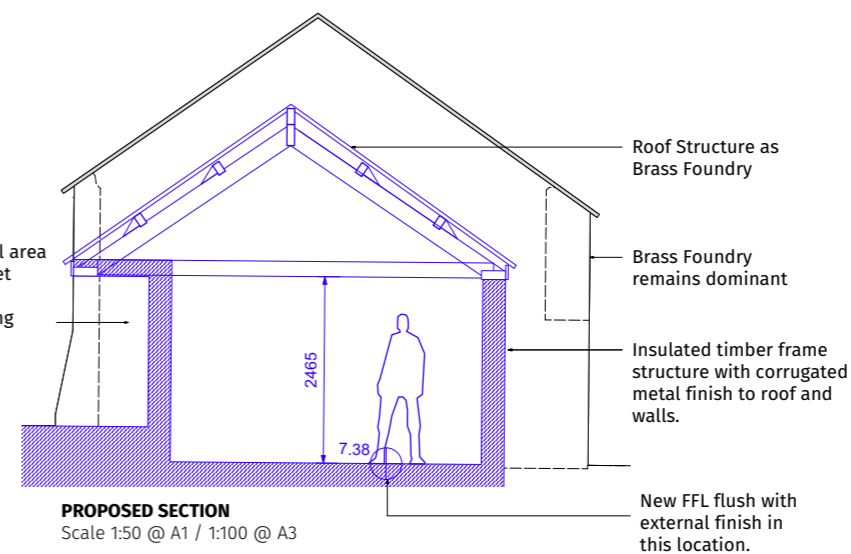
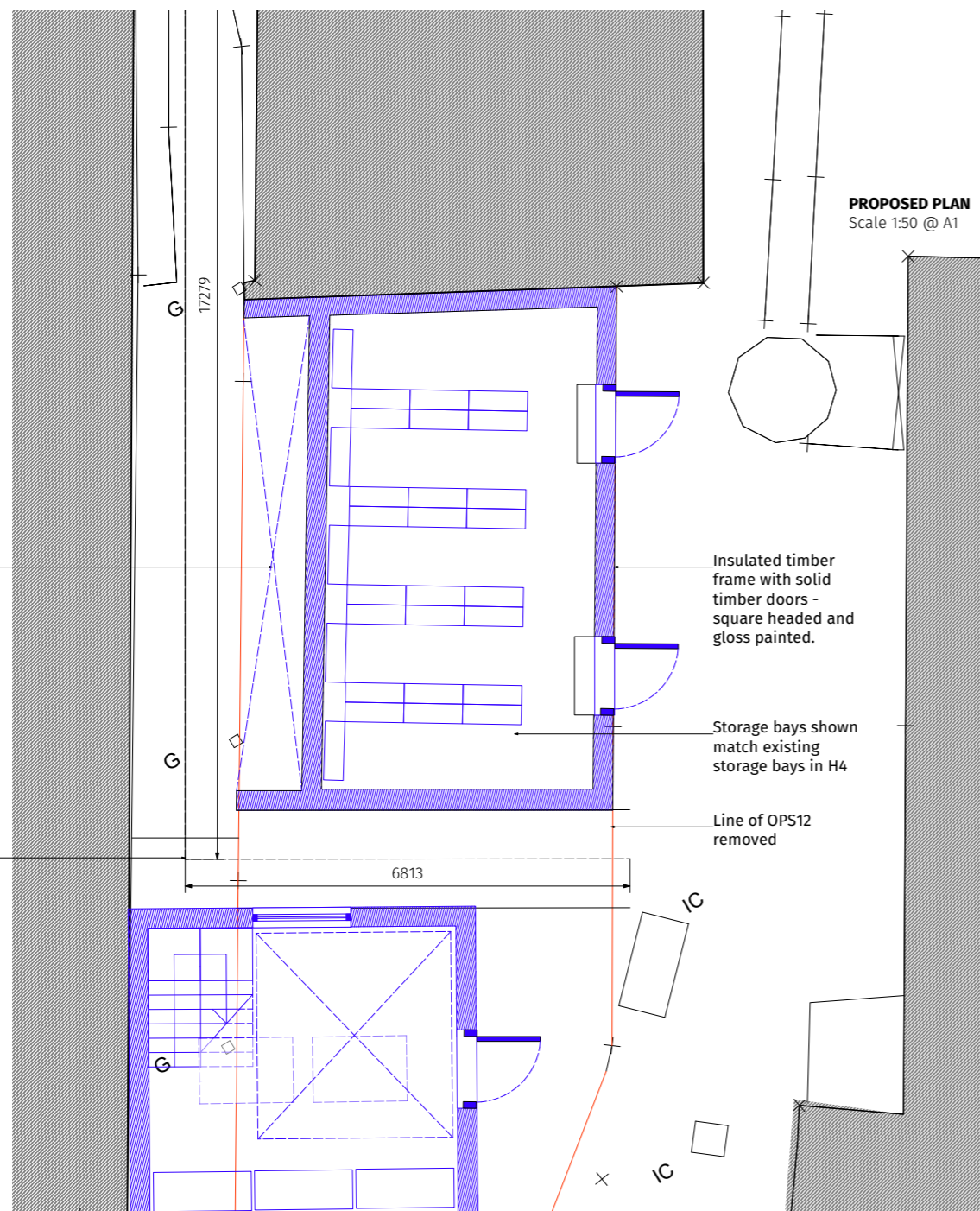
The proposed new OPS12 structure is a single storey replacement with a smaller footprint to what was proposed in Round 1 - a significant reduction in new build area. The proposed plan is shorter and does not come up against H10 - in order to open up the access route between H14 and H4/H5. It is intended as a new internal storage space and plant store.

Refer to drawings 81 OPS12_01.

Site N



Both photos show the Brass Foundry (H6) as dominant to any adjacent building - with the saw mills in the distance drawings to eye.



REVISIONS

Thread

Client: FWHR
 Project Architect: Claire Fear

BOSTON LODGE WORKS

OPS12 PROPOSED PLAN & SECTION

Scale:
 1:50 @ A1 / 1:100 @ A3

Date:
 October 2020

81_OPS12_01 A

Thread

H15

Blacksmiths Extension



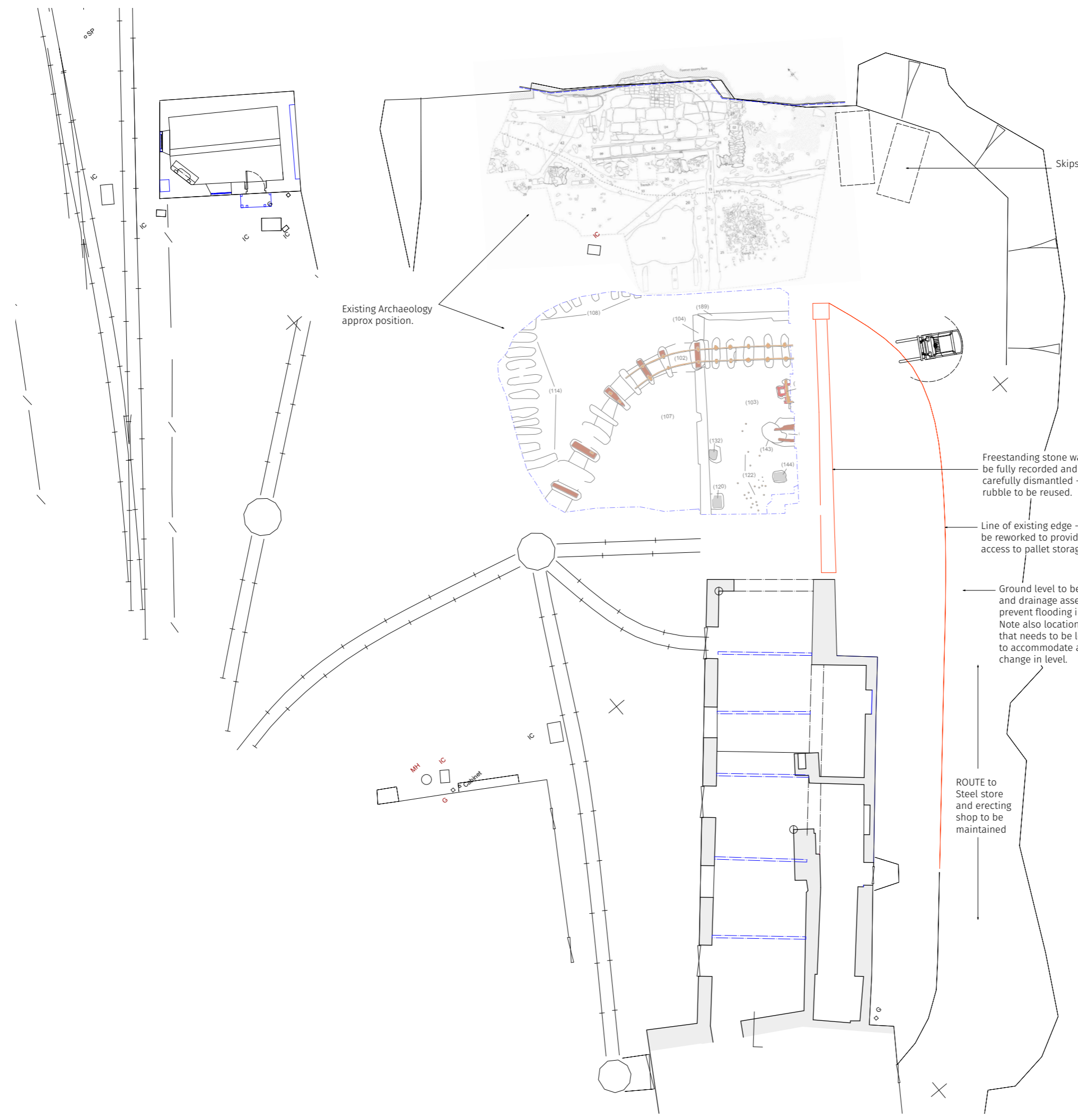
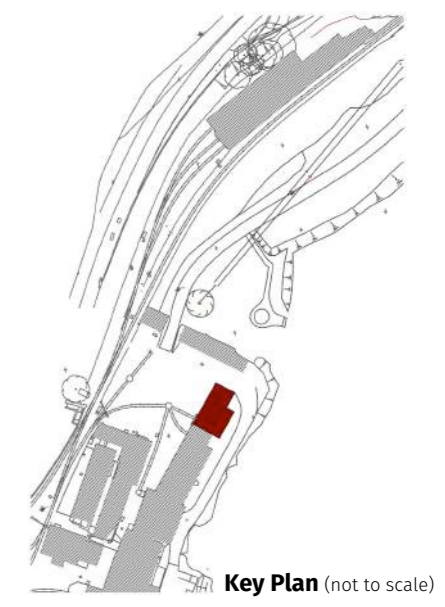
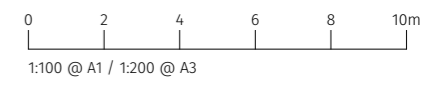
H15 Blacksmiths Extension

The reinstatement of this building has the opportunity of being greater in depth than the Round 1 proposal, to enable the provision of a larger and multifunctional space on site, primarily as a new training room and Britomart engine display (in the location of the previously demolished Britomart Shed).

There is an internal photo of the Smithy Extension looking from the Smithy in the Historic Building Assessment of the building. With careful consideration of use, this physical and visual internal architectural experience can be reinstated to connect the visitor through to the Smithy and the door to the Iron Foundry beyond. This helps to relate the space to historic processes and production on the site. The use of an insulated timber-frame construction and corrugated iron construction will reflect the historic building typology of the previous construction.

Refer to drawings 81_H15_01-03.

Black & white images:
 Top: Smithy interior looking towards Blacksmiths Extension (1959, JL Alexander);
 Middle: Smith interior from the extension through towards Iron Foundry (1960, JL Alexander)



Existing Archaeology approx position.

Freestanding stone wall to be fully recorded and carefully dismantled - slate rubble to be reused.

Line of existing edge - to be reworked to provide access to pallet storage.

Ground level to be lowered and drainage assessed to prevent flooding into H2. Note also location of cable that needs to be lowered to accommodate any change in level.

ROUTE to Steel store and erecting shop to be maintained

REVISIONS

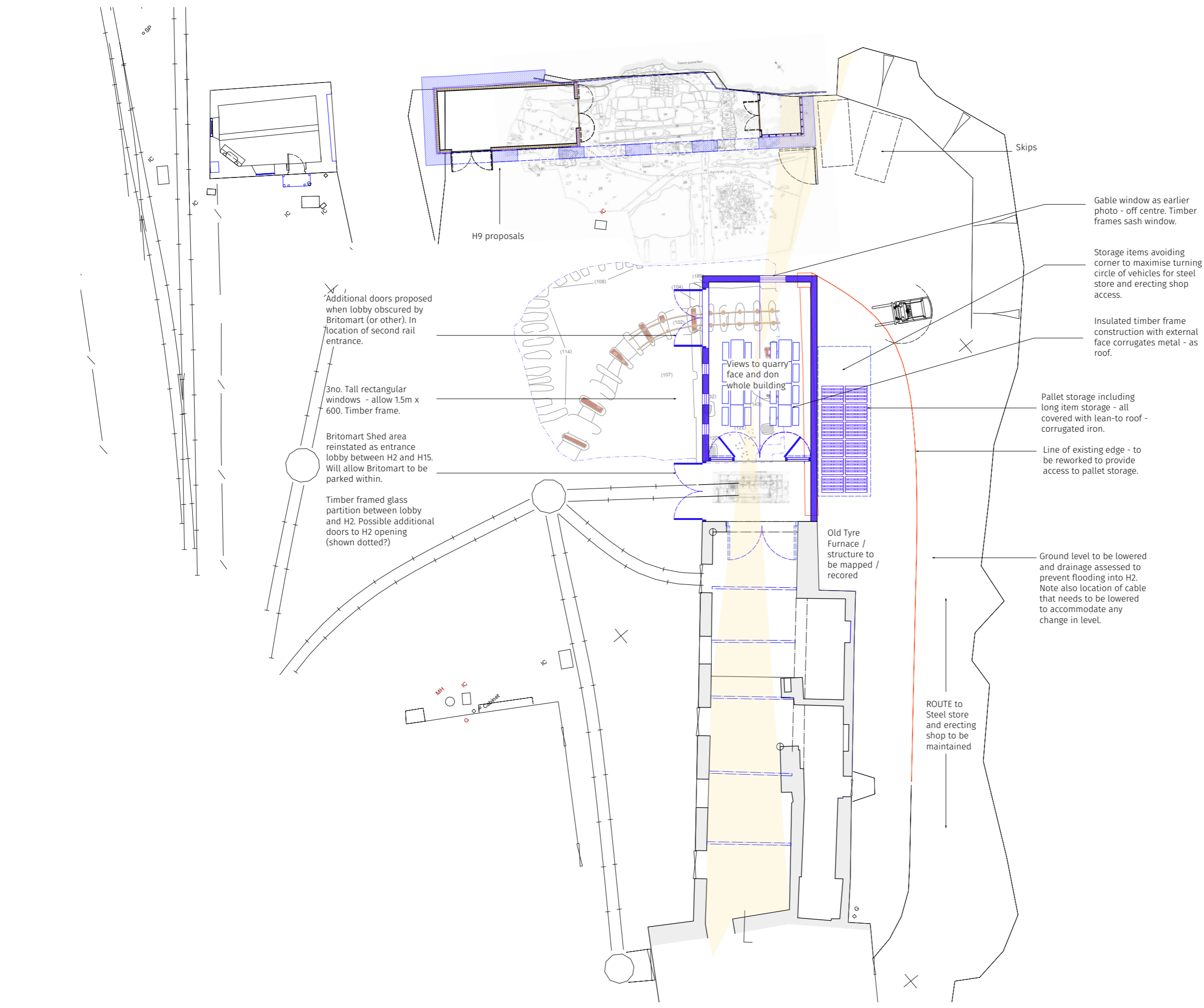
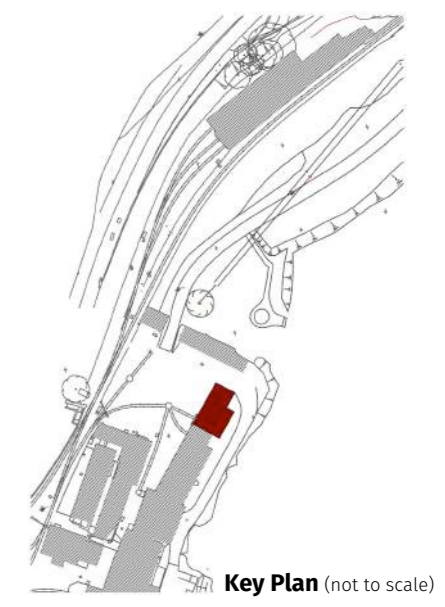
Thread

Client: FWHR
 Project Architect: Claire Fear
 BOSTON LODGE WORKS

**H15 BLACKSMITHS
 EXTENSION
 EXISTING PLAN**

Scale:
 1:100@A1 / 1:200@A3
 Date:
 OCTOBER 2020

81_H15_01



Additional doors proposed when lobby obscured by Britomart (or other). In location of second rail entrance.

3no. Tall rectangular windows - allow 1.5m x 600. Timber frame.

Britomart Shed area reinstated as entrance lobby between H2 and H15. Will allow Britomart to be parked within.

Timber framed glass partition between lobby and H2. Possible additional doors to H2 opening (shown dotted?)

H9 proposals

Views to quarry face and don whole building

Old Tyre Furnace / structure to be mapped / recored

Skips

Gable window as earlier photo - off centre. Timber frames sash window.

Storage items avoiding corner to maximise turning circle of vehicles for steel store and erecting shop access.

Insulated timber frame construction with external face corrugates metal - as roof.

Pallet storage including long item storage - all covered with lean-to roof - corrugated iron.

Line of existing edge - to be reworked to provide access to pallet storage.

Ground level to be lowered and drainage assessed to prevent flooding into H2. Note also location of cable that needs to be lowered to accommodate any change in level.

ROUTE to Steel store and erecting shop to be maintained

REVISIONS

Thread

Client: FWHR
 Project Architect: Claire Fear
 BOSTON LODGE WORKS

**H15 BLACKSMITHS
 EXTENSION
 PROPOSED PLAN**

Scale:
 1:100@A1 / 1:200@A3
 Date:
 OCTOBER 2020

81_H15_02 A

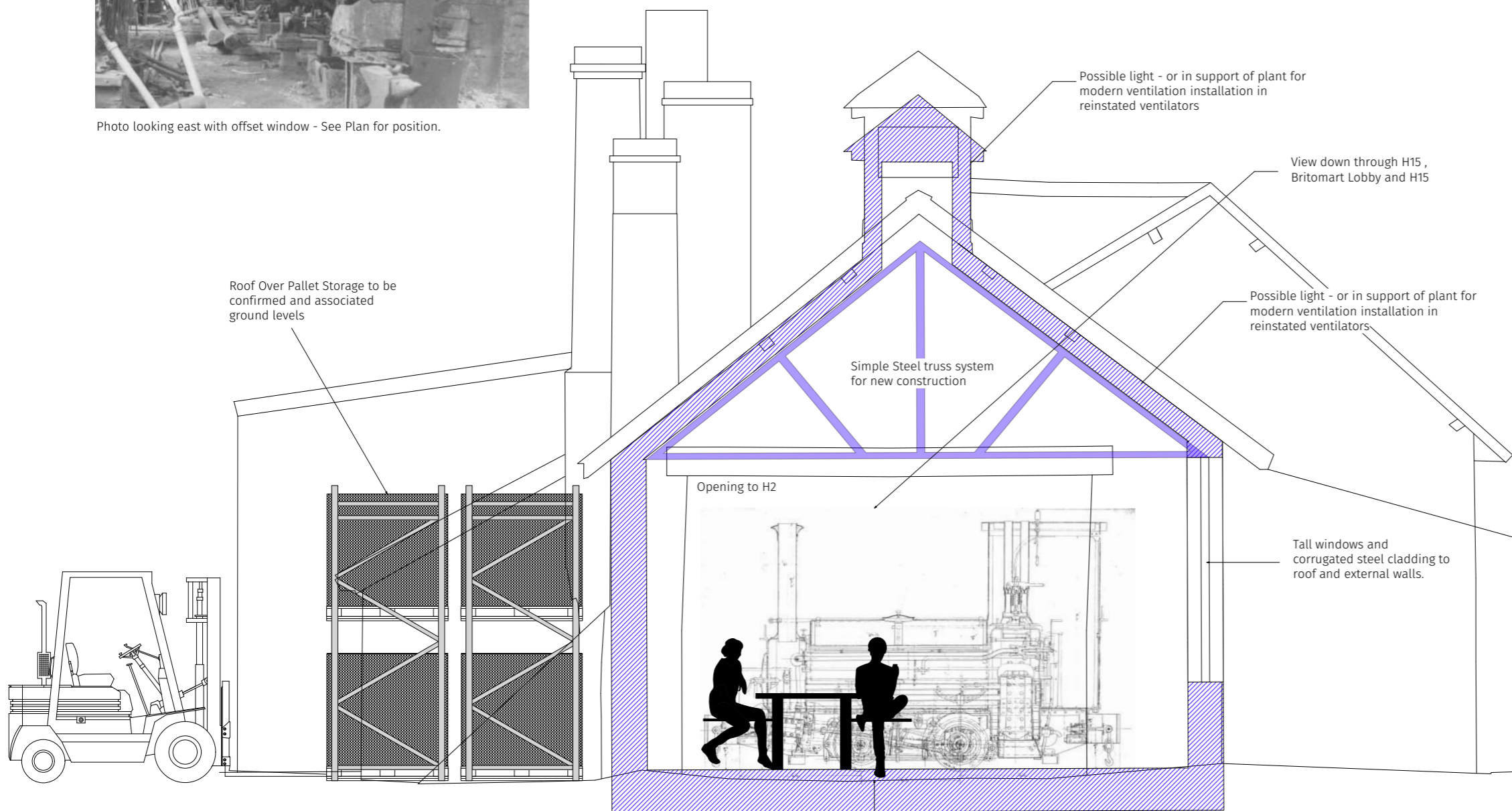


Photo looking east with offset window - See Plan for position.

Photo looking West deep into H2



External View of Blacksmiths Extension



PROPOSED SECTION LOOKING WEST

Seated warm (underfloor heated), modern and insulated space for training, thermally separated from Britomart lobby, but visually and physically connected.

Thread

Client: FWHR
 Project Architect: Claire Fear

BOSTON LODGE WORKS

**H15 BLACKSMITHS
 EXTENSION
 Proposed Short Section**

Scale:
 1:25@A1 / 1:50@A3

Date:
 OCTOBER 2020

81_H15_03

Thread

External

Landscaping and Drainage



Landscaping and Drainage

A practical approach is proposed to ensure that the historical appearance of the Top Yard is balanced with its continuing function as a working site which requires vehicular access for deliveries and maintenance. It has been agreed that the most appropriate finish is a slate waste gravel surface similar to the appearance of the existing but with an improved sub-base to ensure adequate drainage and reduce the need to build the surface up over time. It is important that the material used is sourced locally - slate waste being the natural choice for the area.

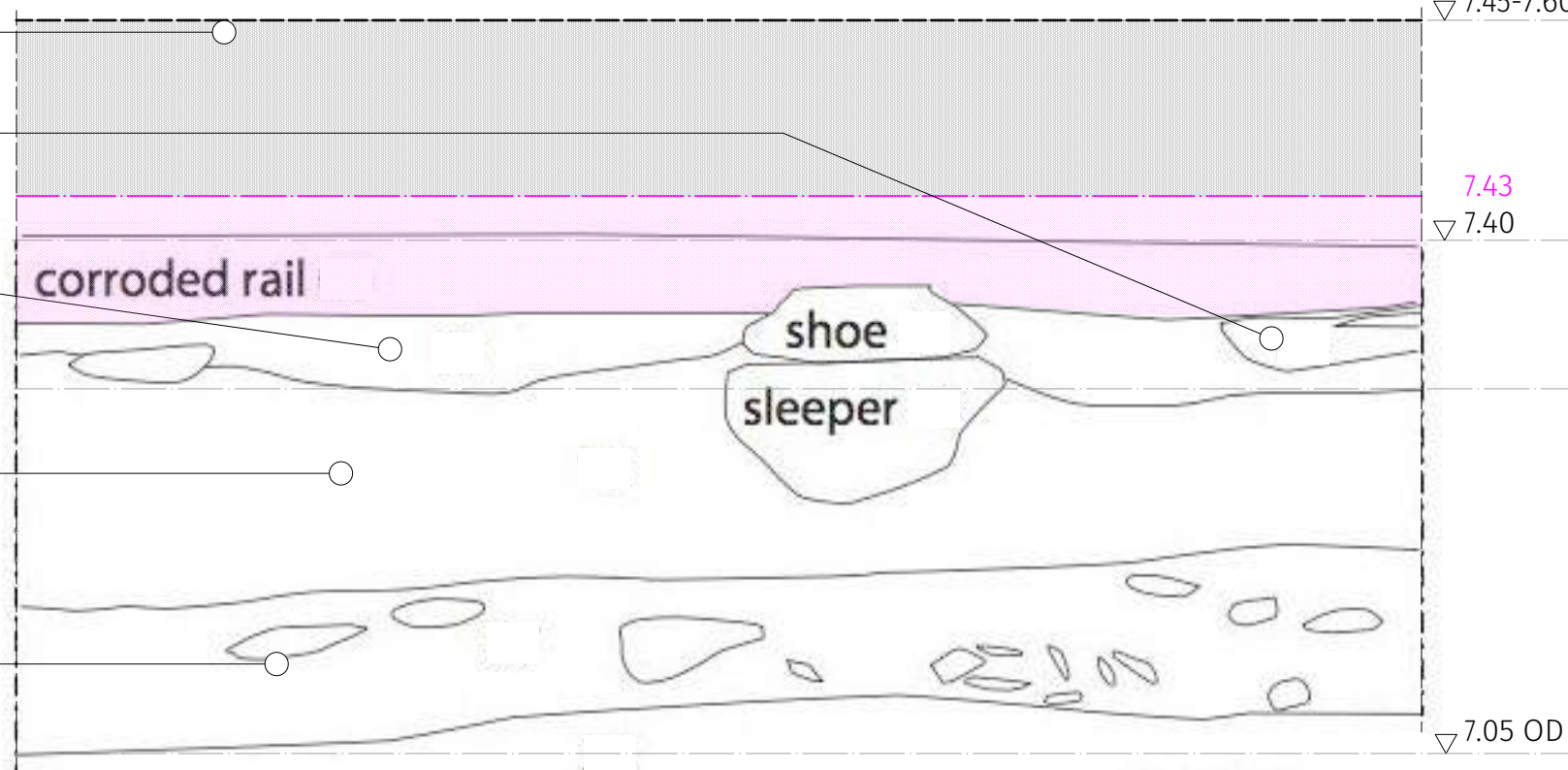
An analysis of the archaeological finding for the site shows how the Top Yard surface has gradually been built up with deposits. The proposals aim to take this archaeological layering into account in order to protect the archaeology below, and also to seek to reduce the levels minimally to reduce water ingress and damp issues in the buildings which have lower floor levels. *Refer also to Integral's Stage 2 report.*

An improved path between Old Engine Shed and Top Yard is proposed as a self-binding slate waste gravel surfacing from the Boston Lodge halt (station), to the entrance point to the top yard. The timber gates to the Top Yard (part of Round 1) are to be omitted as they would hamper the day-to-day running of the site, and do not contribute significantly to the sense of enclosure of the Top Yard, which is achieved by H9 and H15.

Refer to drawings 81_DET_01 and 81_GA_03.

Material

- Modern material
- Wagon Shed slate flooring
- Modern material
- Corroded rail
- Compacted clean yellow sand, no cement, from "sandpit" area not estuary
- Compacted clean yellow redeposited glacial till (silty gravel and sand, quarried from nearby)
- Compacted shattered stone and larger rocks (350mm below wagon shed floor)



Approx. Levels

- ▽ 7.45-7.60
- 7.43
- ▽ 7.40
- ▽ 7.05 OD

Archaeological Phasing

- Range of Modern levelling & rough hardstanding
- Proposed new floor level**
Phase 3 Wagon Shed
- Phase 2 - Levelling of Top Yard pre-1842
- Phase 1 - The Quarry Workings

Top yard build-up

Scale 1:5 @ A3

(excerpt and notes derived from Gwynedd Archaeological Trust's report on archaeological excavations, Feb 2015)

REVISIONS



Client: FFWHR
Project Architect: Claire Fear

BOSTON LODGE WORKS

**LANDSCAPING STRATEGY
ARCHAEOLOGICAL
BUILD-UP DETAIL**

Scale:
1:5@A3

Date:
NOVEMBER 2020

81_DET_01



1:5 @ A3

Pedestrian Level Crossing
 as part of guided visitor access route
 FfWHR to confirm exact location
 C2 Safety to confirm safety requirements

Removal of hump, lowering of tarmac
 (work by FfWHR)

Note: Archaeological Watching
 Brief Required for excavations











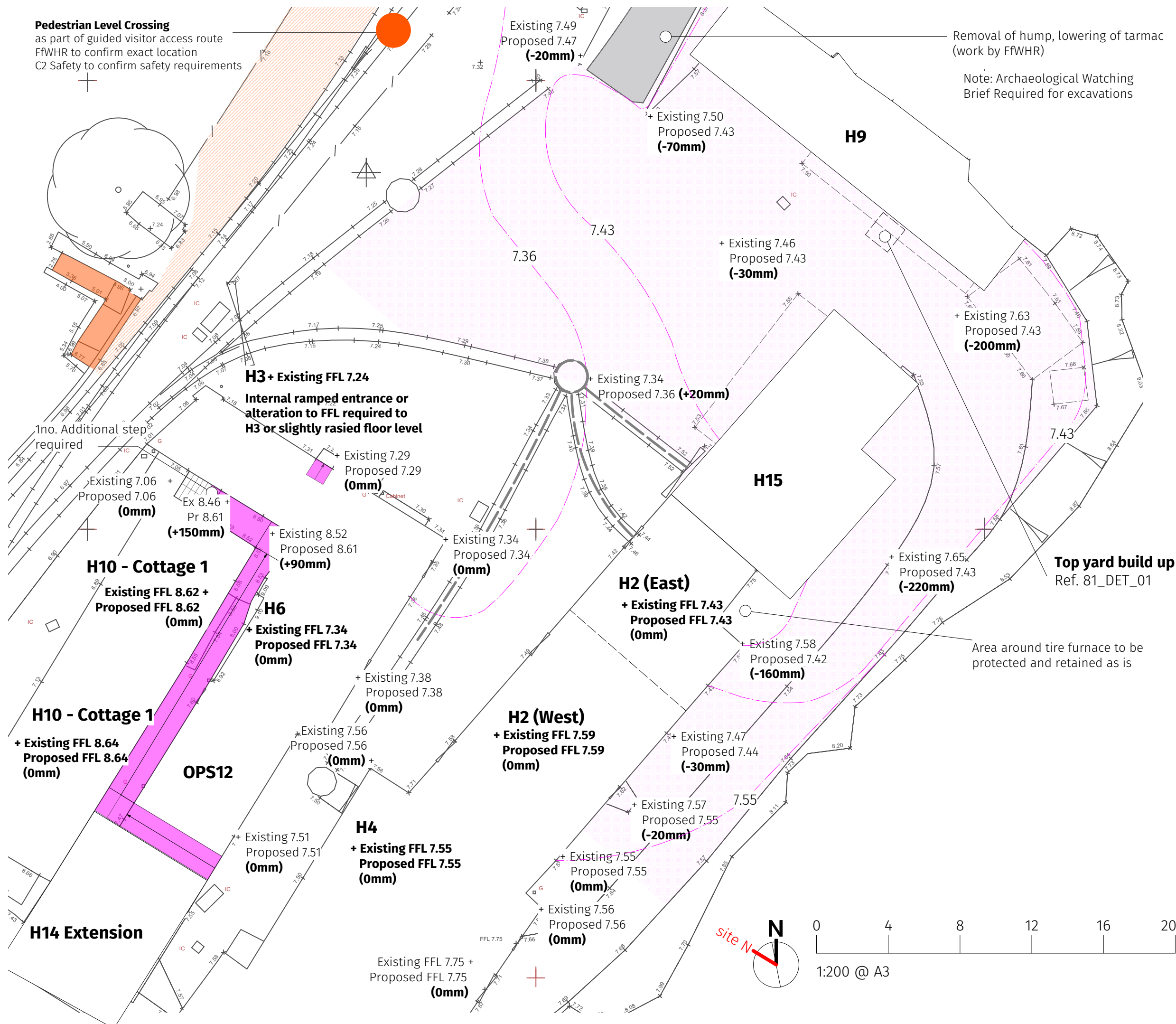
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Key to landscaping/surfaces

-  Existing tarmac
not part of project proposal,
surface by FfWHR)
-  Existing hardcore/gravel
(not part of project proposal,
surface by FfWHR)
-  Proposed new self binding slate
gravel surface - to improve
accessible pedestrian route
-  Conservation repairs to existing
stone steps
-  Area of proposed new ground level
and surface as shown
-  Proposed new sloped paving (tbc)
for improved accessibility
-  Proposed site contours
(indicative)
-  Section of rail road to be lifted &
relayed (by FfWHR volunteers)



Top yard build up
 Ref. 81_DET_01

Area around tire furnace to be
 protected and retained as is



Client: FfWHR
 Project Architect: Claire Fear

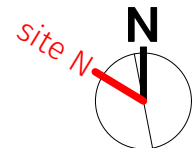
BOSTON LODGE WORKS

**LANDSCAPING STRATEGY
 TOP YARD**

Scale:
1:200@A3

Date:
NOVEMBER 2020

81_GA_03 A



1:200 @ A3

6. Progress and Next Steps

Due to the thought-process required to develop these proposals with a level of understanding appropriate to each of the individual buildings and their connections with each other, the designs have been developed to a degree closer to Stage 3 Developed Design.

This will aid the next steps in the design process, which will include the development of detailed elevations of the Top Yard buildings in particular.

The team has commenced consultation with Cadw and the conservation officer, and is awaiting their detailed response. Further discussion will be required as we progress.

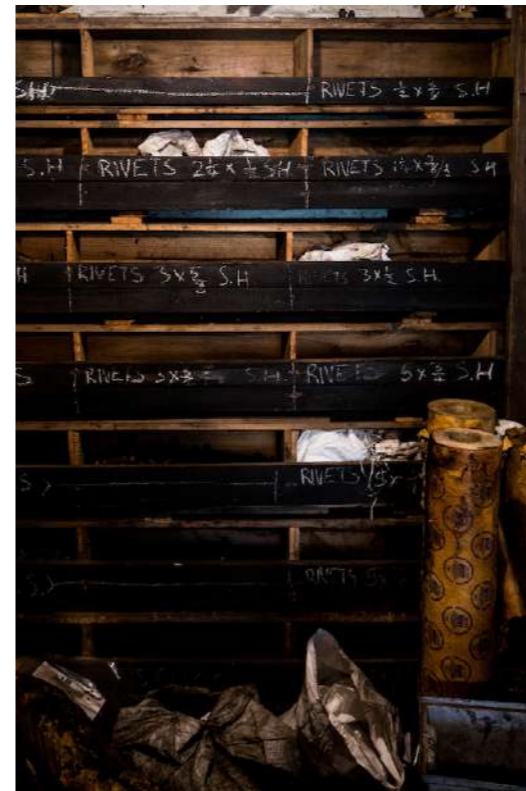
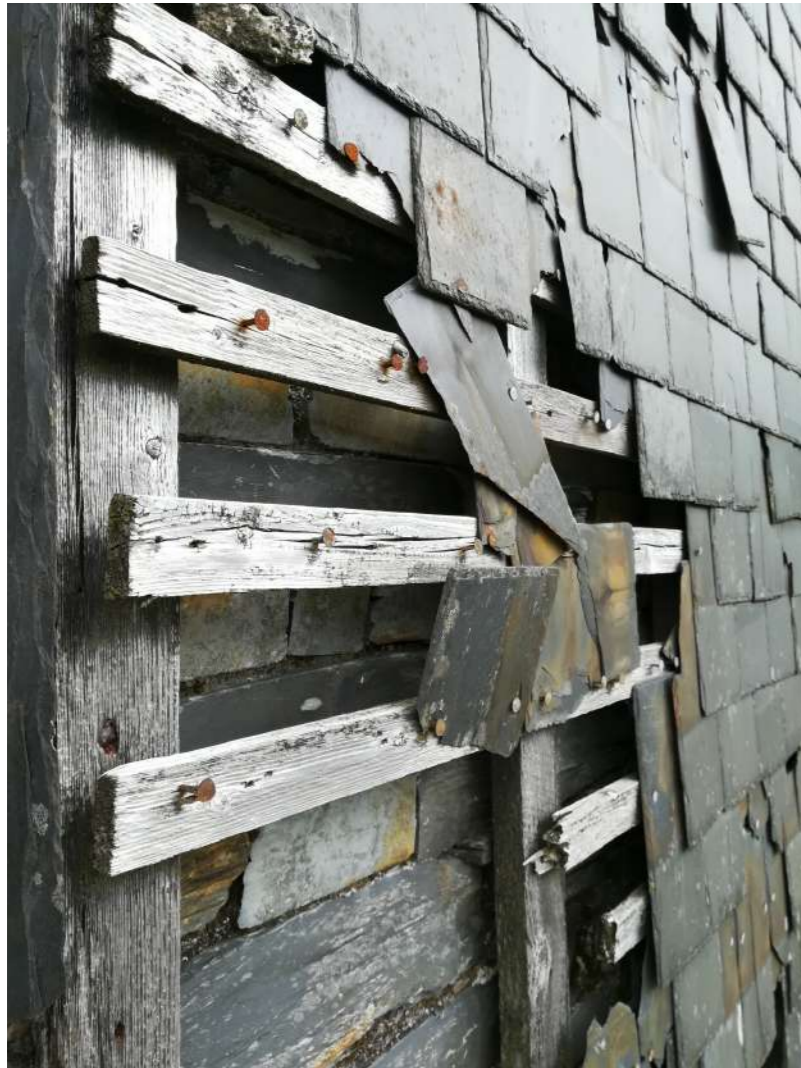
An initial schedule of repairs has been compiled based on Thread's physical visit to the site and the information which formed part of the Round 1 application.

The next steps will involve obtaining further information, including:

- Trial holes to provide a greater understanding of the Top Yard substructure;
- Archaeological investigation of the stables to the north of H10;
- Opening up work in H10 to confirm structural requirements; &
- Asbestos R&D survey which is now being commissioned, with a clearer idea of the proposals.

Having established the principles of reinstatement for the lost structures, and the desired palette of local, site-specific materials, the priorities at this stage are now:

- To establish the build-up of the proposed surfacing to the Top Yard, and its drainage.
- To further investigate the aesthetic for the site - for elements such as lighting and fixtures (E3); the technical possibilities of waste slate materials for example; and how these materials will contribute to the elevational treatment of the buildings.



Thread

Thank you.